BUSINESS WEEK

NOV. 27, 1948

W. S. Rodgers: His new refinery headlines an eastward move (page 6)

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THE COVER

On the 26th floor of the Chr Building in New York City is a p paneled office leading into a spac board room. The office, expensively simply furnished, is occupied by W liam Starling Sullivan Rodgers, T Co. board chairman.

Here, in a quiet, matter-of-fact w the final decisions are made affect Texaco's vast petroleum empire. Fr this office came the final O.K. for c struction of Texaco's new refinery Westville, N. J., an important part the petroleum industry's tremend postwar expansion on the East C (page 24).

• **Give and Take**—Rodgers operates T aco on an open-door principle. solicits advice and ideas from sub dinates, delegates responsibility widely as he can, only approves or jects after the other fellow has had f rein to present his view.

This give-and-take technique is a rect outgrowth of Rodgers' experien Born in Columbus in 1886, he gra ated from Yale's Sheffield Scient School, then went into the oil fields a "roughneck" laborer. He joined Te in 1915 at Port Heches as a worker the asphalt plant, rose via the manuf turing side. He became president 1933, board chairman in 1940.

• **Curiosity**—Rodgers, an unaffec man, has the longest record of serv as a Texaco executive. When as how he held on so long, he repl "Because I know how to keep my da mouth shut." Yet he has an insatia curiosity, pointed up by a story he li to tell on himself. On a trip to the D ver area when president, he kept pum ing the regional sales manager for formation on geographical details. length, the sales manager gave up despair: "Mr. Rodgers," he said. know that Continental has 20% of business here and I mean to find how to get it. I can't answer anyth else." Rodgers laughed uproariously

—Complete story on oil indus East Coast expansion appears on 24. Photo by Elizabeth Timber

BUSINESS OUTLOOK

Estimates that we would build a million houses a year for 10 years seem to have been a bit too optimistic.

There may still be a need for that many. But our ability to build them—and to sell or rent them—is something else again.

This year will be the biggest since the mid-1920's. Even so, experts doubt that total housing units started will go much over 925,000 (page 19). Starts for the first 10 months were 803,000, 13% ahead of 1947.

•

More rental housing will be built as homes become harder to sell.

There has been some shift in that direction, but so far it has been slight. The percentage of for-rent houses to all residential building rose slightly over the 1947 rate to about 20% of the total in the first half of this year.

But, in the building boom of the 1920's for-rent units were 40%.

Rental housing represents investment. And investment money doesn't become plentiful until speculative building grows less attractive.

•

Builders had big plans for rental housing before the election. Now they are less confident.

One worry is that rent controls might be restored on new for-rent units.

•

Lumber supplies will be less of a brake on the building boom in 1949 than at any time since the war's end.

Inventories gradually are being rebuilt at all levels.

Last winter, prices went down as weather reduced lumber demand. This year, the drop has started earlier and has carried deeper.

Engineering News Record, a McGraw-Hill publication, lists cuts in Douglas fir running from $2 per 1,000 ft. in Denver and Minneapolis to $23 in Birmingham; pine down from $1.25 in New York to $15 in Detroit.

•

Plywood continues to work into an easier supply position.

Production in September fell only a shade short of last March's record, totaling 182-million sq. ft. That was more than 7-million sq. ft. above August, with the gain about equal for exterior and interior types.

And, as production again exceeded shipments, inventories rose to 54-million sq. ft. A year earlier, they were only 38-million.

•

Prices of building materials and equipment are measurably higher now than a year ago. Yet construction costs, in the aggregate, can sometimes be pared.

This traces to the fact that there are fewer delays than last year.

Take plumbing supplies, for example. Manufacturers' shipments in the third quarter this year totaled $63-million, 44% ahead of 1947.

•

Hope that inflationary tendencies are on the wane is expressed in the November issue of the Federal Reserve Bulletin.

Nevertheless, the Federal Reserve Board warns that there is no certainty that prices might not bound up again. It points out that two earlier declines (April-May, 1947, and January-February, 1948) were false alarms.

In fact, not a few companies this week were watching rising costs push their prices up.

Some advances: on General Motors trucks and Buick and Cadillac 1949

models; a series of rises on flour as wheat advanced; a fraction of a cent on gasoline by Esso and Shell; 6% to 9% on Electric Storage Battery's line; about 1¢ a lb. on American Brass' zinc and lead alloys.

•

You're missing something that is hidden if you look only at the over-all figure on manufacturers' inventories.

The over-all value of nondurable-goods factories' stocks was virtually unchanged in September. But the value of finished inventory, that hadn't moved, was up $133-million. This gain was obscured, in the aggregate, by a reduction of about $126-million in stocks of purchased materials.

•

Lower food prices are saving General Motors money. They carried the cost-of-living index down nearly a point to 173.6 in mid-October. This puts it just a shade below the July 15 level, thus averting a wage increase for G.M.'s 265,000 hourly rated employees.

•

"Business population" is stabilizing. Evidence accumulates that the wartime "deficit" in new concerns has about been made up.

The number of companies stood at 3,880,000 on June 30, the Dept. of Commerce reports. That's a gain of 800,000 since the war ended.

Yet the rate of gain has slackened. New concerns started in the first half of 1948 totaled only 179,000 against 238,000 a year earlier.

This the department describes as a flattening out at a high level.

In manufacturing, the trend has turned down. More firms were discontinued (by failure or otherwise) than were started in: stone, clay, and glass products; clothing and other finished textile products; furniture; machinery other than electrical; petroleum and coal; and nonferrous metals.

•

High business volume has enabled a large percentage of new postwar businesses to get fairly well established.

There is no data to show "how well these new enterprises may have fortified themselves financially," the Dept. of Commerce points out. Yet they have "weathered the initial phase of securing a foothold."

Fears that many veterans would sink their small stakes in business and lose haven't proved out.

•

Steady expansion in the dollar size of our economy is emphasized by figures covering the third quarter of this year.

Gross national product—the measure of all the things that everybody buys—was at an annual rate of $255.9-billion. That was $5.5-billion above the rate in the second quarter.

The rise, in itself, isn't so surprising. Quarterly increases of that magnitude have been common enough since the end of the war.

But this latest gain was posted without benefit of rising prices.

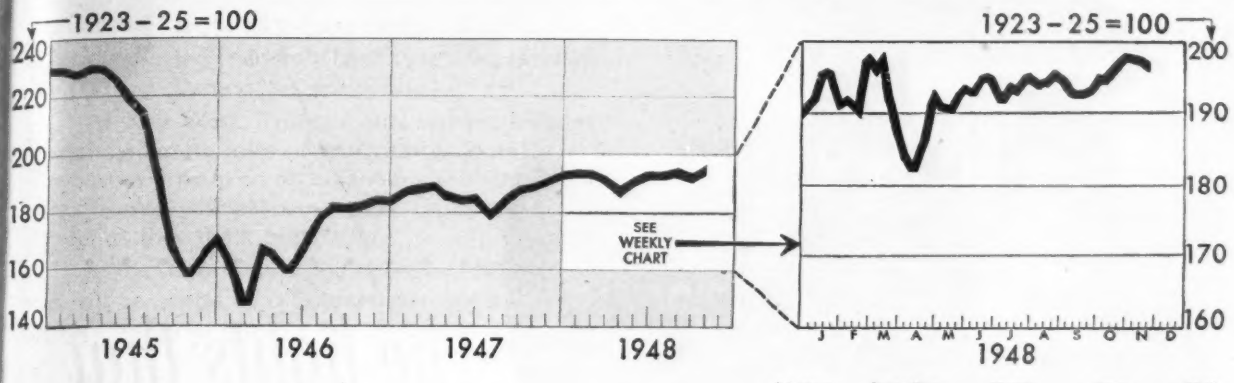
•

Wage and salary payments were the most rapidly expanding segment of our economy in the quarter ended Sept. 30.

These boosted personal income. The amount people had to spend, after taxes, rose to a record annual rate of $193.7-billion.

The interesting thing is that they didn't spend all of it. The rate of saving went up to $15.2-billion a year from $11.7-billion in the second quarter of this year—highest rate since the end of the war.

FIGURES OF THE WEEK



	§ Latest Week	Preceding Week	Month Ago	Year Ago	1941 Average
Business Week Index (above)	*197.0	†197.4	198.3	193.8	162.2
PRODUCTION					
Steel ingot operations (% of capacity)	99.2	99.0	98.9	96.3	97.3
Production of automobiles and trucks	120,592	†116,029	123,067	115,197	98,236
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)	$20,505	$23,885	$27,018	$21,562	$19,433
Electric power output (million kilowatt-hours)	5,627	5,571	5,539	5,180	3,130
Crude oil (daily average, 1,000 bbls.)	5,659	5,626	5,596	5,275	3,842
Bituminous coal (daily average, 1,000 tons)	2,092	1,967	1,997	2,187	1,685
TRADE					
Miscellaneous and L.C.L. carloadings (daily average, 1,000 cars)	84	90	89	88	86
All other carloadings (daily average, 1,000 cars)	61	64	64	59	52
Money in circulation (millions)	$28,215	$28,337	$28,157	$28,595	$9,613
Department store sales (change from same week of preceding year)	–9%	–8%	+11%	+11%	+17%
Business failures (Dun & Bradstreet, number)	126	96	124	79	228
PRICES (Average for the week)					
Cost of Living (U. S. Bureau of Labor Statistics, 1935-39 = 100), Sept...174.5	.....	.....	174.5	163.8	105.2
Spot commodity index (Moody's, Dec. 31, 1931=100)	401.5	398.8	404.3	454.9	198.1
Industrial raw materials (U. S. Bureau of Labor Statistics, Aug., 1939=100)	280.9	279.7	275.5	293.4	138.5
Domestic farm products (U. S. Bureau of Labor Statistics, Aug., 1939=100)	317.3	317.6	324.8	399.1	146.6
Finished steel composite (Steel, ton)	$95.05	$95.05	$95.05	$76.09	$56.73
Scrap steel composite (Iron Age, ton)	$43.00	$43.00	$43.16	$40.58	$19.48
Copper (electrolytic, Connecticut Valley, lb.)	23.500¢	23.500¢	23.500¢	21.500¢	12.022¢
Wheat (Kansas City, bu.)	$2.31	$2.27	$2.24	$3.00	$0.99
Sugar (raw, delivered New York, lb.)	5.68¢	5.68¢	5.67¢	6.32¢	3.38¢
Cotton (middling, ten designated markets, lb.)	31.70¢	31.56¢	31.23¢	34.82¢	13.94¢
Wool tops (New York, lb.)	$1.695	$1.715	$1.584	$1.835	$1.281
Rubber (ribbed smoked sheets, New York, lb.)	19.40¢	19.97¢	22.32¢	23.50¢	22.16¢
FINANCE					
90 stocks, price index (Standard & Poor's Corp.)	121.1	120.6	131.5	121.3	78.0
Medium grade corporate bond yield (30 Baa issues, Moody's)	3.53%	3.54%	3.51%	3.45%	4.33%
High grade corporate bond yield (30 Aaa issues, Moody's)	2.82%	2.84%	2.86%	2.80%	2.77%
Call loans renewal rate, N. Y. Stock Exchange (daily average)	1½–1¾%	1½–1¾%	1½–1¾%	1½–1½%	1.00%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)	1½–1¾%	1½–1¾%	1½–1¾%	1¼%	½–¾%
BANKING (Millions of dollars)					
Demand deposits adjusted, reporting member banks	NA	46,928	46,998	47,622	††27,777
Total loans and investments, reporting member banks	NA	62,378	62,296	64,924	††32,309
Commercial and agricultural loans, reporting member banks	NA	15,583	15,374	14,212	††6,963
Securities loans, reporting member banks	NA	1,390	1,309	1,760	††1,038
U. S. gov't and gov't guaranteed obligations held, reporting member banks	NA	33,319	33,416	37,829	††15,999
Other securities held, reporting member banks	NA	4,196	4,341	4,221	††4,303
Excess reserves, all member banks	880	950	910	883	5,290
Total federal reserve credit outstanding	23,834	23,929	23,869	23,041	2,265

*Preliminary, week ended November 20th.
NA Not available at press time.
†Revised.
§Date for "Latest Week" on each series on request.
††Estimate (BW—Jul.12'47,p16).

The lights that must not fail

Danger is ever near when a hospital, school, theater or other building of public assembly suddenly is plunged into darkness. Such lighting failure may occur at any time and anywhere, for despite all precautions of utility companies, storms, floods, fires, and accidents beyond their control can cause interruptions of normal electric current supply.

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WASHINGTON OUTLOOK

HOW FAR CAN TRUMAN GO just being friendly? That's what the real New Dealers are wondering.

At Key West, Truman returned his congressional leaders to roles of importance. Barkley and Rayburn will be in on all high Administration strategy; Truman will let them handle chastened Southerners as they think best.

In the departments and agencies, the weeding out will be gentle; if a Cabinet member has to go, he will be given time to look for a place to land.

•

This is all geared to the momentum of Truman's election victory. Friendliness might even add a little to his chances of getting a lot of the progressive program through at the outset of the new administration. Certainly it won't hurt.

•

Of course, Truman will have no trouble getting legislation on such things as federal housing, some kind of minimum-wage increase, aid to education. They have been simmering for a long time.

But when the rough bills come up—Taft-Hartley repeal, higher taxes, economic controls—Truman hopes the friends he has made won't fail him.

•

Northern Democrats from labor districts are already fearful, foresee a short era of good feeling.

They want the President to knock the opposition in Congress off balance and keep it there—by a dramatic reshuffling of the Administration; by giving top policy jobs to men like Dean Acheson, Paul Porter, Wilson Wyatt.

So far, there's only meager evidence that Truman intends to call back the New Dealers; their only man at Key West was Jonathan Daniels, and he has gone back to North Carolina.

True, Wyatt has been running around Washington talking to people. So have governors-elect Adlai Stevenson and Chester Bowles. But so far they have just been visiting.

A big item in Truman's program next year—from the standpoint of political ideology—will be the anti-inflation bill. Yet the Council of Economic Advisers headed by cautious Edwin Nourse is writing that bill—not a dyed-in-the-wool New Dealer, says Leon Henderson.

•

After all, the ones who stuck by Truman all the way were the boys from Battery D—the Snyders, the Vaughans. The New Dealers of Americans for Democratic Action were faint-hearted at Philadelphia.

So the Snyders and the Vaughans have Truman's ear; and he plays that way.

•

IN REBUILDING THE LABOR DEPT., Congress won't give Secretary Tobin every agency that involves labor. Tobin will get enough to fill his building, but he will have a tough time getting a hand in labor-management disputes.

Certainly, he won't get the National Labor Relations Board or the railway labor board.

There's a chance that Cy Ching's Federal Mediation & Conciliation Service—taken out of Labor by the Taft-Hartley act—will be returned, but not without a fight. Ching will quit if the shift is made.

Services to workers, apart from union-management bargaining, will make up the enlarged department. All Tobin has now are the Bureau of Labor Statistics, minimum-wage enforcement, Women's Bureau; he will get the Employment Service, unemployment compensation, Children's Bureau.

Federal Security Administrator Oscar Ewing, in unbureaucratic fashion, is willing to give these up; he sees himself in the Cabinet as Secretary of a brand new Dept. of Public Welfare.

•

LABOR'S INFLUENCE on government policy may show up—for the first time since the election—at a December conference with the National Security Resources Board.

Top union leaders are coming in to talk over NSRB's proposed emergency legislation—It includes such controls as a manpower draft, wage ceilings, and other toughened World War II regulations.

NSRB Chairman Hill is out to win labor's support. The leaders won't be easily sold. But if it ever does come to mandatory job shifts, they will see to it that workers' benefits accumulate in the old job while they're gone—for instance, guarantee of seniority, and pension rights.

•

NSRB has already talked to groups from business; next come farm leaders.

•

GERMAN SCRAP SHIPMENTS to the U. S. are picking up. Imports rose from 9,000 tons in July

to 50,000 in October, for a four-month total of 152,000. If things continue to improve, Commerce Secretary Sawyer probably won't ask Congress to legalize a corporation—industry run, under government sponsorship—to move the stuff at set prices.

Sawyer had drafted the corporation plan under the Taft-Wolcott voluntary-allocation act, but the Justice Dept. this week refused to O.K. the proposal.

Reason: Though Gen. Clay sets price ceilings in western Germany, Justice isn't sure resale ceilings can be set here. (The voluntary-allocation law bars Commerce from even discussing prices.)

•

CLEANUP OF THE ECA LAW in the light of eight months' experience will be asked of Congress next year. In a nutshell, it will be an attempt to repeal pet provisions of the pressure groups.

Hoffman's people already have some definite ideas of the kind of changes they want—mainly modification or elimination of restrictions designed to protect particular parts of the U. S. economy.

These range from price protection to outright subsidy.

•

Here are the changes ECA has in mind.

Shipping—Eliminate or ease the requirement that at least 50% of ECA exports from this country must be carried in U. S. bottoms.

This would give the rapidly expanding European merchant marine a bigger cut of the available tonnage, thus improving European dollar balances.

Flour—Permit Marshall Plan countries to mill all wheat sent from the U. S. under grant. Now, a minimum of 25% must go in the form of flour, to keep American millers happy.

ECA thinks it is more important to give the Europeans this business; for one thing, they will get more bread flour per bushel of wheat, plus some feed.

Farm Machinery—Knock out, or raise, the $75-million-a-year ceiling on farm-equipment exports. ECA countries want more tractors. Besides, domestic demand is expected to slacken by mid-1949; production of equipment this year is up 20% over 1947.

Strategic Materials—Set up a government corporation to take over ECA's part in the job of obtaining key commodities (BW-Sep.25'48,p15).

Congress gave ECA the job of seeing that Europeans repay us for part of our aid with essential materials—bought out of 5% of the local currencies they must set aside to match dollar gifts.

The argument is that this blocks a sure source of dollars. Elimination of the 5% requirement, and help from an RFC-type agency, would give Europe the dollars and supply us with the materials faster.

Surplus Farm Commodities—Drop the ban on offshore purchases of commodities which the Agriculture Dept. declares surplus in this country.

ECA doesn't see why it should have to subsidize the American farmer's propped-up prices.

Price Restrictions—Throw out the requirement that ECA countries can buy at no higher than prevailing U. S. prices; uncertainty over the meaning of "prevailing" has harried ECA officials, slowed up free bargaining.

•

PENTAGON BRASS wants to arrange some big mergers among aircraft manufacturers.

Reason: They realize that even the expanded air rearmament program isn't enough to keep all 15 major producers in business.

Five of the 15 have had no significant airframe orders out of the record peacetime fiscal '49 appropriation. The Air Force had hoped its scheme to spread work with subcontracts would keep the stragglers going. But it isn't working that way.

The latest merger deal in the works would consolidate Convair and Northrop. The hitch is Northrop's insistence upon better terms from Convair's Floyd Odlum.

In 1946, the Justice Dept. frowned down a deal to merge Convair and Lockheed on the ground of possible antitrust violation.

Now, the Air Force thinks it has convinced Justice that mergers of this kind are a good thing for national defense.

•

• Democratic Chairman McGrath wants the Hatch Act changed to let political committees borrow campaign funds at the bank—then pay back after the contributions come in. . . .

• Mrs. Eleanor Roosevelt is being talked up as Ambassador to France—anti-deGaullists say she's the best bet to buck up Queuille's middle-of-the-road government. . . .

• Retired oil man Ralph Zook, ex-president of the Independent Petroleum Assn., will become head of Interior's Oil & Gas Division when Max Ball resigns to return to private business. . . .

• State Dept. careerists, often maligned as cookie-pushers, have hired a press agent to win friends and impress Congress. His story: Nowadays, the Foreign Service man is likely to be an engineer, geologist, banker, exporter.

BUSINESS WEEK

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Another Big Housing Year Ahead

Residential construction in 1949 will come close to 1948's near-record volume. Builders will aim at lower price brackets.

The postwar housing boom probably passed its peak this year. But it still has enough momentum to make 1949 a top-notch year for residential building by any standards.

• **Survey**—That's the way construction experts size up the prospects for the coming year. And their opinions check closely with the results of a BUSINESS WEEK survey of building plans in various parts of the country.

One middle-western builder summed up the opinion of the industry in general when he said: "Next year is going to be good. Maybe not quite so good as this year. But I don't think I'll have any trouble keeping busy."

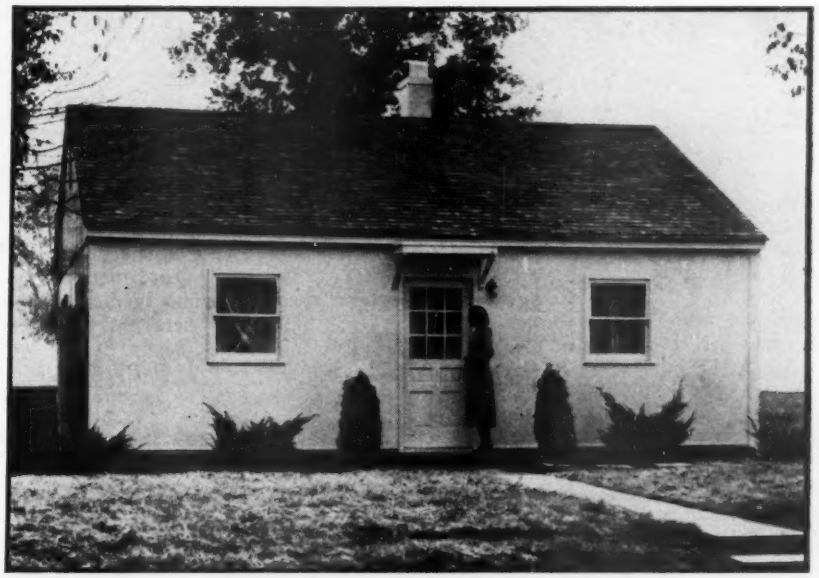
• **Over-All Picture**—Statistically, here's how the picture shapes up:

The total number of new, nonfarm dwellings started this year probably will hit 925,000. That will top everything on the record except 1925's 937,000 starts.

Expert estimates of next year's residential building range from 850,000 to 950,000 starts. Most construction men think 850,000 to 875,000 is the best bet. Even on that basis, 1949 would be bigger than any year except 1924 and 1925—and, of course, 1948. As far as general business is concerned, residential building would continue to be one of the biggest props under the boom.

• **Smaller Houses**—One of the main differences between 1948 and 1949 will be the type of homes that are built. During the coming year, builders will shift from fairly high-priced houses ($15,000 and over) to comparatively low-priced jobs (under $10,000). This will be true whether or not the government tries to give low-cost housing first call on building materials, as some officials have suggested. The shift already is under way. Formal allocations would only confirm it.

This switch to lower-priced dwellings is one of the signs that the boom is beginning to fade a little. Builders all over the country report that the market for higher-priced homes is playing out. They take this as a sign that the buyers' market is slowly coming back. And they are switching to construction in the under-$10,000 bracket because they think there is more unsatisfied demand there than anywhere else.



TYPICAL of lowest-price homes is this National Homes Corp. $5,100 prefab. Its . . .

• **Examples**—In Minneapolis, for instance, builders estimate that about 68% of the homes built this year sold below $10,000. Next year, about 85% will be in that class.

In Dallas, the district director for the Federal Housing Administration says that demand is just about satisfied in the $9,000-$14,000 range. Most of the city's postwar building has been in this bracket; now it is shifting to lower-cost units.

• **Tighter Credit**—One thing that is cutting into demand for houses obviously is the tightening credit situation. Builder after builder reports sales that have fallen through because the prospective buyer couldn't arrange a mortgage or couldn't raise enough for the down payment.

An Oklahoma City banker, for example, says that he is now sticking close to the rule that a man shouldn't get credit to buy a house that costs more than 2½ times his annual salary. On this basis, he finds that $6,000 to $7,500 is about the limit for most of the applicants at his bank. Government mortgage insurance doesn't help much, because the bank doesn't like the 4½% rate on FHA-approved paper. It can get 5½% on other good investments.

LIVING ROOM shows its fiberboard interior construction, minimum of "trim"

Several of the big Detroit banks and mortgage companies say that their port-

folios are already bulging. They are trying to hold the total down. And even when the banks are willing to lend, they stick to a cautious appraisal policy. This means that there is likely to be a big gap between the bank's valuation and the builder's asking price. The buyer has to cover the difference in addition to the regular down payment.

• **Shortage Eased**—Another thing that takes the urgency out of demand is the simple fact that the worst of the housing shortage is over now. We are still a long way from having everyone established in a dream house of his own. But the days when you had to take anything you could get or sleep in the street are just about over now.

From 1941 through 1947, about 4-million new families were formed in the U. S. Another 675,000 families got started this year. In addition, there has been a country-to-city migration of several hundred thousand families since 1941. All told, there are now about 5-million more families who need housing now than there were in 1941.

• **Accomplishment**—But by the end of this year, we will have built about 4-million new permanent nonfarm homes. Besides that, there are about 350,000 temporary homes, and around 500,000 recently converted apartments in previously existing buildings.

In other words, there has been enough building to take care of most of the increase in families since 1941. This doesn't mean the end of the housing shortage, of course. With incomes high, people want better quarters than they have had. Many families that have been doubled up want to set up separately. And every year, more old houses reach the point where it's no longer economic to maintain them. But even so, the worst of the squeeze is over now. Home seekers are still eager, but they are a good deal less desperate.

• **Caution**—Builders began to feel the slackening in demand around the middle of last summer. Immediately some of them turned cautious. One New York contractor explains: "It doesn't make any difference to me if the building business as a whole is doing well. I have to watch my step and see I don't get stuck myself. A little dip that doesn't even show up on your statistician's charts can put me back swinging a pick."

In some areas, builders have been stuck. In Baltimore, real estate men report that there are 500 to 6,000 vacant new houses. Some small builders have been foreclosed there.

For the country as a whole, housing starts in October were off sharply—to 72,000 against 94,000 a year ago. Much of this was seasonal—last year, builders got off to a slow start and worked frantically to get caught up before cold weather set in. But some of it probably reflects uncertainty about the demand for new houses.

• **Plans**—Even so, there are enough firm plans set up to make 1949 a banner year.

In Cleveland, Bruscino Builders, specialists in low-cost on-site fabrication, is planning to put up 500 houses next year in the $8,950-$9,500 bracket. This year, it turned out around 300.

In San Francisco, a company that built 300 homes this year hopes to do at least as well in 1949. "As far as we are concerned," it says, "the outlook is not hazy; we expect business to be good."

• **Problems**—The main thing that will hold down total residential construction next year will not be lack of demand but the various difficulties that come from concentrating on low-price homes.

In some areas—Oklahoma City, for instance—there is a shortage of lots zoned for low-cost construction. In others, there is trouble with building codes. And everywhere there is the problem of getting banks to put up mortgage money for small dwellings.

Some contractors are afraid that grand-scale public housing projects will take labor and materials away from them next year. But most of the experts aren't figuring on any large volume of public housing in 1949. They think that anything the new Congress does will come too late to make much difference in the 1949 picture.

• **Materials**—Unless military spending takes a big jump, shortages of materials shouldn't be much of a problem next year. Lumber is getting easier—although fine grades are still short in spots. Some builders complain of a gray market in cement, but the total supply should be enough to take care of next year's housing demands. Metals are still short, of course, but even here contractors report that there are some signs of easing.

Prices are still rising. One trade guess is that new homes will cost 5% to 8% more next year. Eventually, the price problem may be the thing that breaks the boom. But for next year there still seems to be enough demand to keep the industry going full blast regardless of price.

Swapping and Shopping Gets Steel

Kaiser-Frazer had the pig iron; Phoenix-Apollo had the mill. Now K.-F. has the mill—and both have more steel.

Industry's steel hunger has produced some deals that would be standouts even in a swap column. But few have been more curious—or intricate—than the one Kaiser-Frazer Corp. worked out last week.

• **Shopping Around**—The break between K.-F. and Cleveland financier Cyrus Eaton left K.-F. looking for steel. Reason: It gets about 23,000 tons monthly from Eaton's Portsmouth Steel Corp. Options on most of this tonnage are scheduled to run out next June 30 (BW—Jun.12'48,p36).

So K.-F. waited for the chance to buy another basic-steel mill: Now it's the owner of the Phoenixville (Pa.) plant of Phoenix-Apollo Steel Co. It paid more than $3.6-million for six open-hearth furnaces, three mills, and a monthly production of 26,000 tons.

• **Must Supply Apollo**—K.-F. bought the Phoenixville plant from a syndicate of some 25 steel-products manufacturers, who in turn had purchased the plant last year for about $4-million (BW—Aug.30'47,p20). They wanted sheet bars and slabs for a sheet mill they owned at Apollo, Pa.; that's how the Phoenix-Apollo Steel Co. came into being.

But the Apollo mill won't be left stranded because its source of supply has been sold. The terms obligate K.-F. to send 12,000 tons of sheet bars and slab to the Apollo mill monthly. This will be enough to operate the Apollo mill at capacity, and to supply the manufacturers' syndicate.

• **K.-F. Has Pig**—This, of course, opens a question: Why didn't Phoenix-Apollo keep its plant and sell the extra steel to hungry consumers?

The syndicate won't say. But the most likely explanation is that it was having trouble getting pig iron to supply those open-hearth furnaces.

And that's precisely where K.-F. came in: It could get the pig iron. From the blast furnace in Cleveland which it leases from War Assets Administration—and subleases to Republic Steel Corp.—it can get 5,000 tons a month now. The sublease to Republic runs out Nov. 1, 1949. But K.-F. can cancel the sublease after next May 1, and get the whole 37,000 tons of monthly output from this furnace. Meanwhile, from a blast furnace it leases at Struthers, Ohio, K.-F. gets about 15,000 tons of pig a month.

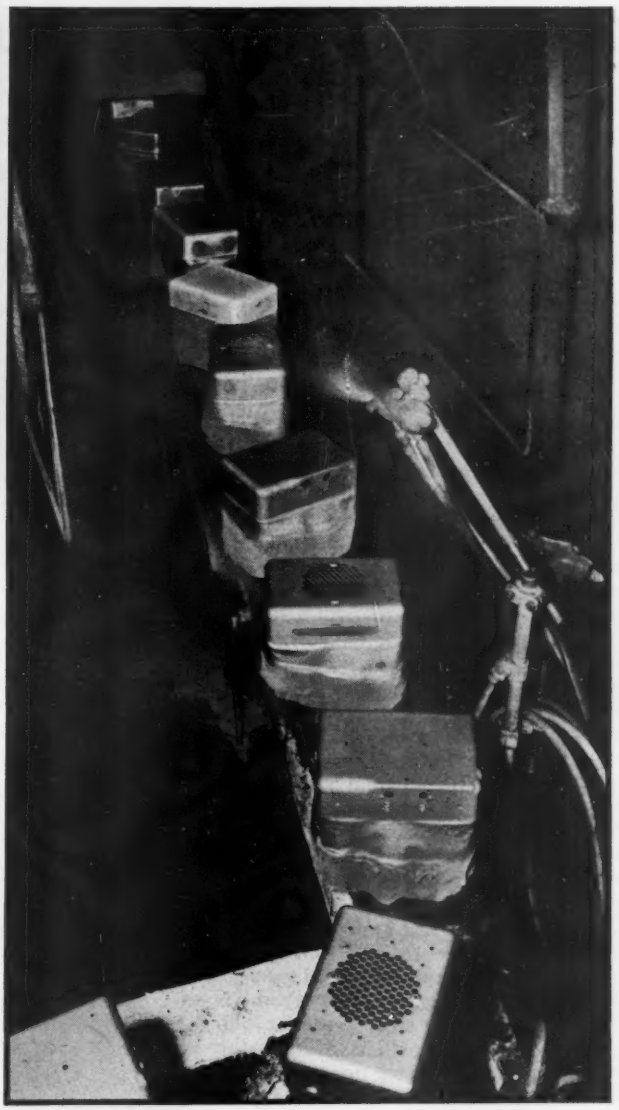
• **The Provo Angle**—There's still another angle to the deal. Last February, K.-F. bought the Ironton blast furnace at Provo, Utah, with a monthly output of about 16,000 tons. True, it would be expensive to ship pig iron from Utah to Pennsylvania, but K.-F. might be able to figure something out.

Where did K.-F. get the money to buy the Phoenixville plant? By making a profit on its operations, the company says.

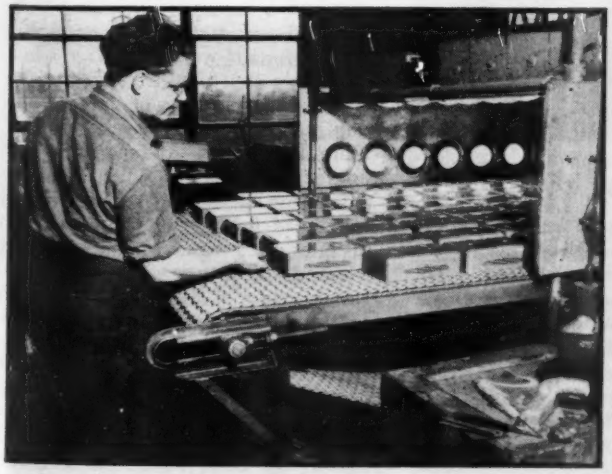
1 Unpainted auto radio cases are placed on conveyor spindles. Conveyor moves cases into paint spray booth

Electrostatic Painting

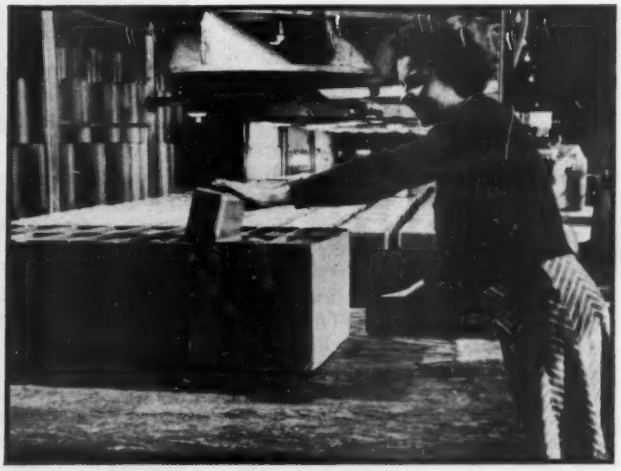
When a particle floating around in the air picks up an electric charge, it jumps for the nearest grounded surface. And if this particle happens to be paint, and the nearest ground is an object that needs to be painted, the result is a boon to industry. First to put these twos and twos together was an Indianapolis Kitchenware painter, Harold J. Ransburg. A few years ago Ransburg organized the Ransburg Electro-Coating Corp. at Indianapolis, began turning out electrostatic painting apparatus for lease. The process is simple. Conveyor lines carry pieces between wire electrodes carrying a high potential—130,000 volts. Paint sprayed into this electrical field picks up a negative charge, jumps to the grounded pieces. The result: an even, all-'round coat of paint. Pictures show the Ransburg process in action at the job-painting plant of Enameled Steel Sign Co., Chicago. Enameled Steel estimates the Ransburg method takes only one-third as much paint as hand-spraying.



2 Cases rotate in electrostatic field between grids. Sprayed paint particles are charged, jump to grounded case



3 Worker lifts painted cases from conveyor to belt of drying-oven. Infra-red lamps bake paint dry



4 Finished auto-radio cases are inspected and packed as they come off drying-oven belt

Rail Traffic vs. Rate Hike

Some railroad men think that talk of shift of freight away from them is overrated, since truck rates have gone up, too. They hope that, if new 13% raise is granted, shippers will stick by them.

The Interstate Commerce Commission opens hearings next week on the railroads' petition for a 13% hike in freight rates. It will come up smack against a fundamental problem: Just how much traffic will the rails lose if rates go up again?

• **The Roads' Case**—As far as the need for more revenue goes, the roads will be able to make a pretty clean-cut case. Rising costs have been chewing steadily into income. There is another round of wage increases coming up. Over the long pull, the only way the carriers can stay in the black is to take in more money.

But the question of what another rate boost would do to traffic isn't so clear. Since war's end, rail rates have gone up about 44%. This is a lot less than the rise in the general price level. But there are signs that a hefty amount of freight already has switched to trucks and waterways.

• **Dilemma**—This situation has the makings of a painful dilemma for the rails. If another rate boost is going to drive away too much traffic, there may be no way to keep income ahead of the rising tide of costs.

Shippers have had a lot to say about the problem recently (BW—Oct.30'48, p19). To find out what railroad managements are thinking, BUSINESS WEEK has checked with the chief executive officers of the major carriers. Here is the way their answers stack up:

• **Some Optimism**—Some rail men think the danger of traffic diversion is overrated. They point out that truck rates have gone up, too. And they predict that crowded highways and rising costs will put a limit on truck competition in the future.

For instance, W. A. Johnston, president of the Illinois Central, says the stories about extensive diversion of traffic "are not in accordance with our experience. I do not think the experience of other railroads generally is different from ours." He goes on:

"Carloadings for the Illinois Central for the period Jan. 1 to Oct. 21, 1948, show 1,696,508 cars loaded and received, compared with 1,713,507 for the corresponding period in 1947. The decrease is 16,999 cars, or 1%. One item of import traffic accounts for a decrease of 19,965 cars. We know that the loss of this traffic was not due to diversions to barges or trucks. It was not received at our ports. . . ."

The president of one of the big western roads takes somewhat the same approach: "There is no doubt that a substantial diversion from rail to truck and waterway has occurred, but the spectacular diversions which have attracted so much attention don't necessarily represent the general picture. . . ."

• **Less Optimism**—Most railroad men seem less optimistic than this. But there is no general agreement among them on how things will finally turn out—or on what can be done to help matters now.

Almost all the rail executives blame part or all of their troubles on government aid—direct and indirect—to other forms of transportation.

• **Subsidy**—The head of one of the main midwestern roads unburdened himself this way:

"This matter of subsidy is one which requires some straight thinking on the part of the entire public. Public expenditures for highways, waterways and water terminals, and airline terminals are just as much a part of the transportation costs which the ultimate consumer pays as the freight bills presented by the railroads.

"There is a place where highway, waterway, and air transportation are economically justifiable, but beyond that the public is cheated."

• **The Shipper's Cooperation**—A good many railroad men hope that shippers will stick with them for the short pull. Their reasoning is that, over the long run, shippers know that they need a healthy railroad system. Laurence F. Whittemore, president of the New York, New Haven, & Hartford, told New England shippers: "The issue is whether industrial management will be farsighted enough to pay a high enough price for rail transportation to enable railroads to finance the improvements necessary to insure their continuance in private ownership and to avoid socialized transportation."

Said another big rail man: "Some of the unknown factors are whether the users of transportation are to look at the short pull or the long pull."

• **No Choice**—Several other executives are inclined to be pessimistic about the farsightedness of the shippers. But hopeful or not, they see no choice but to go ahead with the petitions for higher rates.

"We may not be following the right course," says one, "but under the present system of taxpayers' supporting part of the expenses of the competitors' costs of operation, we are following the one course that is open to us."

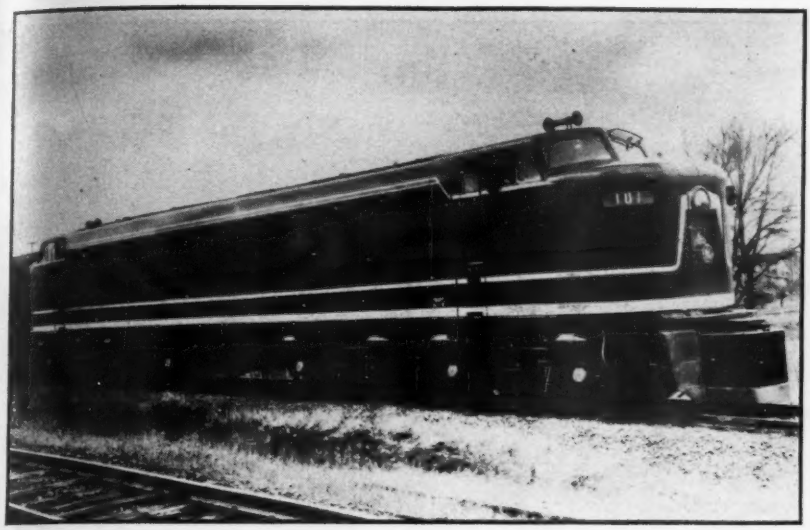
• **Changes Due?**—Eventually, rail men hope, the situation will shake down. When it does, they think they will be able to coax back some of the traffic that the trucks and waterways have taken.

Ralph Budd, president of the Burlington Lines, says: "If there could be a breathing spell during which the country had some measure of stability in all wages and other costs—including those of trucks and water lines—individual rate adjustments would be made where necessary to stop the diversion to other forms of transportation of tonnage now being carried by the railroads."

• **Rate Differences**—And another midwestern rail president offers a similar slant: "One of the great difficulties in the railroad field is our inability to adjust rates to a basis which will meet costs and still assure volume of traffic. The procedure of allowing general horizontal increases in rates (with a few exceptions), pursued by the Interstate Commerce Commission, as a means of meeting increased railroad costs, leaves railroad managements pretty much hamstrung. Certain commodities could well carry higher rates, while others, under a system of horizontal increases, are diverted from the rails."

Policy Maker

There's a growing trend among Hartford (Conn.) insurance companies to free the top executive from administrative duties. The result: Even though he's still very much the chief executive, he can devote his time to general policy and financial management. The latest move in this direction was at National Fire Insurance Co. Last week, directors elected F. D. Layton to board chairman, named H. B. Collamore to succeed Layton as president. Collamore had been executive vice-president. Layton will continue to head the finance and executive committees.



Gas Turbine-Electric Locomotive Out for Trial Run

The first U. S.-built locomotive to be powered by a gas turbine and an electric drive was trundled out for trial runs near Erie, Pa., last week. Built as a joint project by General Electric Co. and American Locomotive Co., this new version of the iron horse is geared to do 79 m.p.h. It is powered with a 4,500 hp. Alco-G.E. unit, and at present burns bunker "C" oil (the possibilities of coal are being tested). Union Pacific R.R. plans to put the engine in operation on a demonstration basis next spring.

More Steel—By Fiat

The Democrats have been clamoring for more basic capacity for two years; now that they control Congress, they will probably pass a law. Industry isn't as "agin' it" as it once was.

Congress is going to do something about steel next year.

For almost two years, the Democratic minority in the 80th Congress has been saying that the steel companies haven't increased their capacity enough to meet the nation's growing needs.

• **Action**—Now, with the reinforcements provided by the elections, they're preparing to go into action.

"Going into action" will take the form of a bill to be introduced early next year. It will authorize the government to assure construction of "adequate" capacity by whatever means may be necessary.

Sen. James E. Murray of Montana, slated to head the Senate small business committee, is ready to act as sponsor for such a bill.

• **Difference of Opinion**—Murray and others have long been arguing for an increase in annual basic ingot capacity of 10-million to 15-million tons; at least that much will be needed, they argue, if the U. S. economy is to have enough steel to meet any national emergency and to support continued full employment. This week, C.I.O. put expansion of steel and other basic industries on its list of political objectives.

To steel men, 15-million tons of new capacity looks pretty fantastic. Most of them are swinging away from last year's view that the steel shortage is a purely temporary thing. But they still are impressed by the million tons they are adding this year, the million tons they plan to add in 1949, and the new processes they are developing to increase output without adding to existing plant capacity (page 69).

• **What Will Demand Be?**—Government and industry economists differ fundamentally on how you ought to figure steel demand. The government people say, for instance, that over the years industry's need for steel per employed worker has risen—from ½ ton in 1900 to 1 ton in 1913, 1.35 in 1929, and 1.70 in 1941. So they assume that in the early 1950's there ought to be 1.8 tons of steel for each of 60-million workers.

The industry, on the other hand, points out that, while population has risen only 55.1% since 1910, steel capacity has increased 134% in the same period.

• **Changing View**—All the same, some steel men are beginning to think that a little help from the government toward catching up with demand wouldn't be unwelcome. So the coming fight in Congress isn't going to center so much on whether the government should act. The big battle will be over how, and how much.

Talk in the steel industry runs mostly to revision of the tax laws's provisions on amortization of new plant. Henry Kaiser has renewed his proposal that steel companies be allowed to amortize new facilities in five years, as they did during the war. Most other companies are suspicious of this device, would rather just be allowed to amortize existing plant on the basis of replacement cost instead of original cost.

Reason: Quick amortization might have a hook in it. To be eligible, projects would probably have to be approved, individually, by the Commerce Dept.

Quick amortization, if adopted, would undoubtedly extend to other programs the administration is interested in—synthetic fuels, for instance. So an individual certification arrangement could end up as rather close government control of capital investment.

• **Proposals**—Sen. Murray and his friends are not wedded to any one device for pushing steel expansion. The senator's bill will offer other proposals:

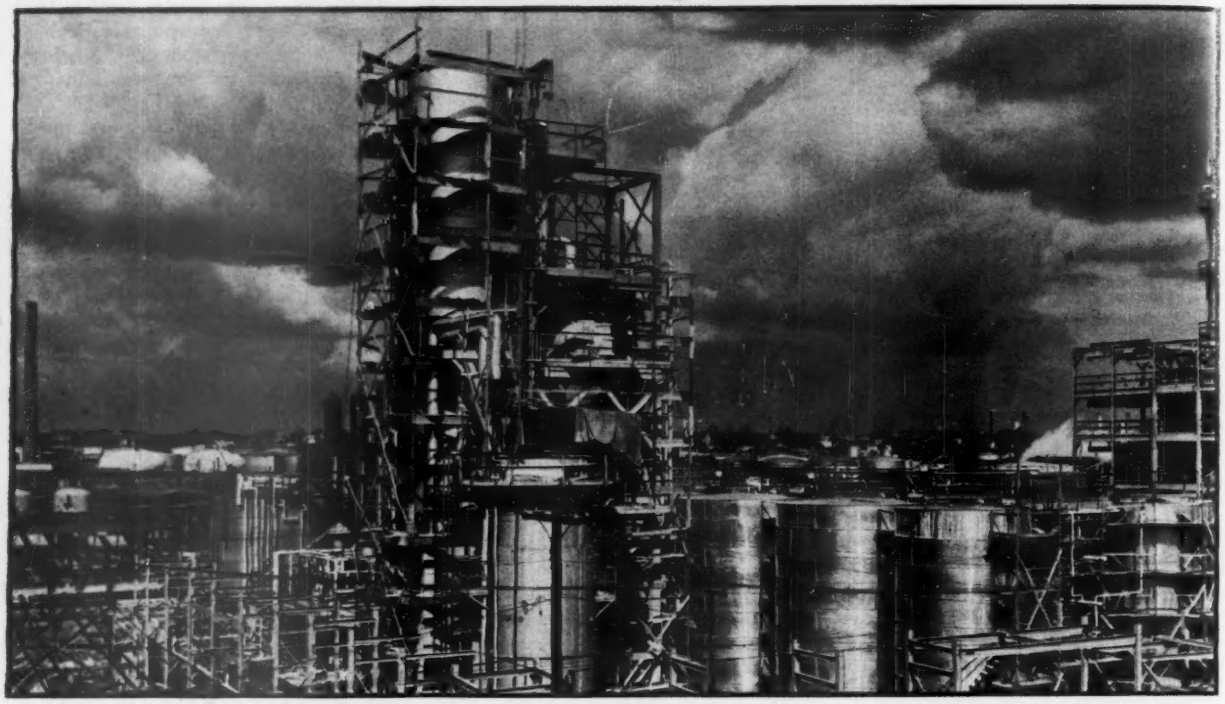
LOANS FROM RFC. The steel companies could borrow four-fifths of the cost of new capacity at 3% interest. Repayment of principal and interest would be deferable in depression years, when the national income falls below a predetermined level.

DIRECT FEDERAL CONSTRUCTION. New ingot and finishing capacity would be built by a latter-day Defense Plants Corp. As it did during the war, the government would lease its plants to private operators, or hire them to operate the plants on a contract basis.

REDUCING CONCENTRATION. An antimonopoly provision would be designed to channel control of government-sponsored new capacity into the hands of the smaller steel compahies or two newcomers. RFC would pick its borrowers; Commerce might not certify Big Steel as eligible for accelerated amortization.

REGIONAL DISTRIBUTION. The bill will seek to capitalize on the change to f.o.b. pricing by requiring that new capacity be built outside of existing steel centers. Decentralization would be a defense asset; it would also help develop retarded areas.

• **Prospects**—The mere fact that the Murray bill will be offered by a New Dealer to a supposedly New Deal Congress does not, of course, guarantee its passage. But the fact that military, foreign, and defense needs for steel are growing steadily boosts its chances of going through.



WORLD'S BIGGEST cat-cracking refinery—Sun Oil Co., at Marcus Hook—has been made even bigger as oil companies' . . .

Refinery Expansion Boosts Capacity 25%

Philadelphia—N.Y. area, closer to foreign crude sources and to eastern markets, emerges as nation's No. 2 refining center.

Almost unnoticed, an important shift has been under way in the oil-refining industry. The East Coast zone—from Bayonne, N. J., to Marcus Hook, Pa.—is fast becoming the country's No. 2 refining center.

• **Plans**—Since the end of the war, major oil companies have spent, or plan to spend, more than $270-million to expand refinery capacity and improve product quality, a BUSINESS WEEK survey has found. Just before this expansion program got started, the region's refineries had over-all capacity to handle about 700,000 bbl. of crude oil a day. By the end of next year, they will be able to process around 900,000 bbl.—an increase of more than 25%.

In dollar value of products, the increase has been even greater. Much of the new capacity consists of catalytic-cracking units; by and large, they deliver a bigger proportion of high-value products from the same amount of crude.

• **Causes**—Thus, by the end of next year, the East Coast will be right on the heels of the Houston-Beaumont area as a refining center. If the present trend continues, it may eventually push past the Texas belt into the No. 1 spot. And, the reasons for the eastern expansion indicate that the trend will continue. Among these reasons:

THE GROWING IMPORTANCE of foreign crude in the supply picture. It's cheaper to ship foreign crude to eastern ports instead of to the Gulf.

THE ADVANTAGE of having refineries as close as possible to the big product markets.

RECENT CHANGES in the technology of oil refining. They have diminished the importance of having cheap Texas natural gas available as a fuel for thermal refineries.

• **Supply and Markets**—Today, crude oil from all corners of the world is delivered to refineries on the banks of the Delaware, or near the New York kills, by tanker. There it is refined into gasoline, kerosene, fuel oils, lubricating oils, and other petroleum products. Then it moves to market via pipeline, tank car, or tank truck.

Those markets are close at hand—in the big concentration of industry and population around Boston, New York, Philadelphia, and Baltimore; refineries spotted in New Jersey and eastern Pennsylvania are within a stone's throw of their customers. (Some companies also operate smaller units in New England, and near Baltimore.)

• **Gas**—Within the industry generally, these two factors are given the lion's share of the credit for the shift. But one oil executive suggests another reason:

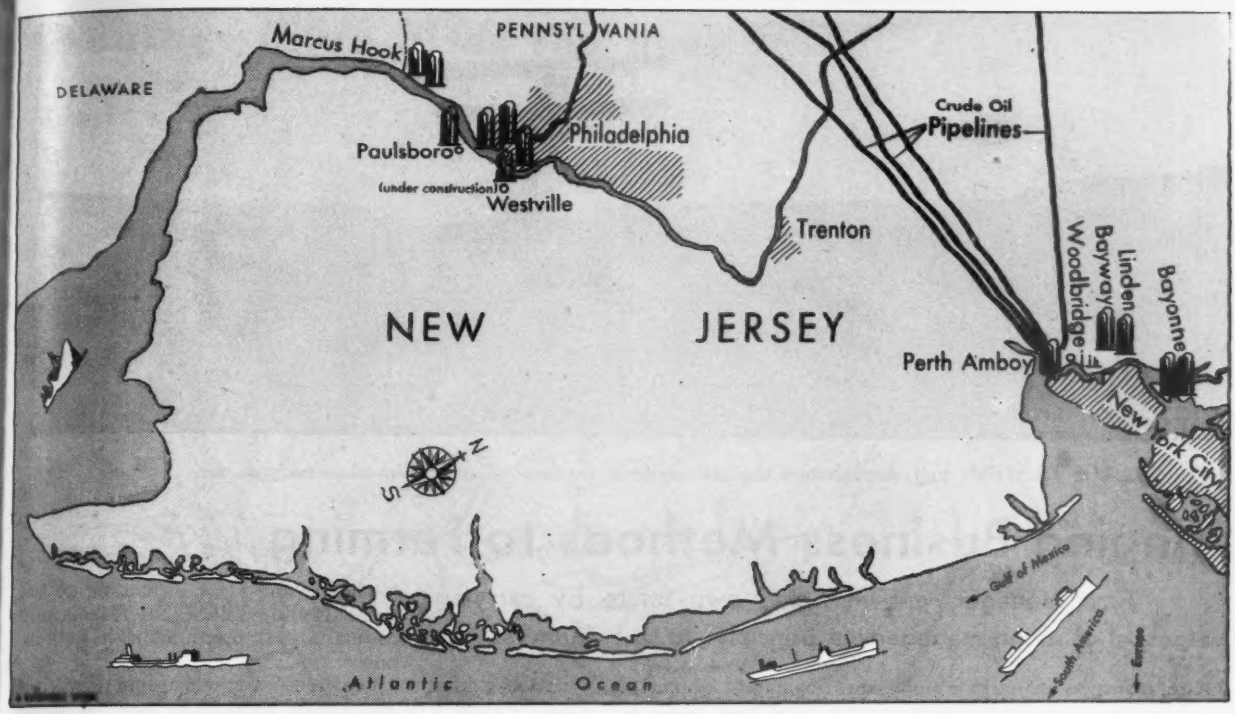
In the early days of the industry, he said, it was uneconomical to refine crude very far from Texas. Reason: To crack crude you needed a lot of heat; and Texas natural gas provided it at practically no cost.

But the development of catalytic cracking changed all that—because catalytic cracking produces its own gas as a byproduct. This is one of the reasons why the catalytic method is so widely used today—and why you don't have to locate a refinery in areas where cheap fuel is available.

• **Employment**—The refinery-expansion program means a lot to the East Coast in terms of employment and take-home pay. When construction now under way or planned is completed, more than 21,000 workers from Bayonne to Marcus Hook will get their pay envelopes from oil refineries. That's a little more than double the figure for refinery employment in March, 1940. Top hourly pay today is about $2.20. Average annual earnings run above $3,900.

Top items on most oil companies' expansion programs are "cat" crackers. Other facilities include: new thermal-cracking units; supplementary distillation tanks; improvement of packaging facilities; increased research.

• **Texaco's Program**—Biggest expenditure in the area is being made by the Texas Co. (page 6). Texas is building a



TWO AREAS near Philadelphia and New York—hold the bulk of the East's refineries

5% On East Coast

completely new refinery at Westville, N. J., near Philadelphia (map); when it is finished, some time next summer, it will have cost more than $50-million. It is designed to handle 40,000 bbl. of crude a day, but Texaco engineers expect it will take up to 50,000.

Initial equipment includes a fluid cat cracker, regular distillation units, a furfural plant to make heating oil, and a catalytic polymerization unit. Principal products will be gasoline, No. 2 fuel oil, diesel oil, and industrial fuel oil.

• **Unusual**—This refinery, known as Eagle Point, is one of the few big refineries in the country that have been built from scratch. Most large installations started as small ones and just grew.

Texas owns enough land at Eagle Point to multiply the original 40,000-bbl. capacity fivefold, if market conditions warrant.

The plant will employ about 800 to start. Training classes for new workers will begin Jan. 1—several months before the refinery is scheduled to open.

• **Uncertain**—Shell Oil Co. may even outdo Texaco. But its plans are not yet final. Under consideration is a 65,000-bbl.-a-day refinery straddling the townships of Woodbridge and Carteret, N. J. Two things are holding up the project at the moment: (1) getting title clearance to land in Woodbridge is a slow job; and (2) Carteret officials aren't happy about changing zoning laws to permit erection of a refinery. Woodbridge has already changed its zoning laws.

Shell now has docking facilities in Woodbridge, serving its 30-year-old bulk and compounding plant.

Here's what the other big oil companies in the area are doing:

Esso Standard Oil Co., Standard Oil Co. (N. J.) subsidiary, operates the biggest refinery on the East Coast—at Bayway; this plant has a daily crude capacity of 143,000 bbl. Esso also has a 28,000-bbl.-a-day plant at Bayonne.

Esso is spending a little over $30-million in expansion and improvements for these two plants. Chief new installation at Bayway will be a fluid cat cracker. Another is a vacuum-pipe still, which will handle from 25,000 to 30,000 bbl. a day. But Esso's over-all refining capacity won't increase much.

Sun Oil Co.'s refinery at Marcus Hook is the second-largest on the East Coast, and has the world's largest catalytic cracking facilities (picture, page 24). This year, Sun has increased its capacity 5,000 bbl. a day—from 135,000 to 140,000. It has also added a dewaxing unit, with a daily potential of between 100 and 150 tons of wax. And a packaging unit is under construction, capable of sealing 300 quarts of oil a minute in one-quart cans.

Exact cost of these improvements has not been revealed. But Sun has allotted $48-million for refinery expansion throughout the country; a good part of this is being spent on the East Coast.

Atlantic Refining Co. has one of the biggest expansion programs under way. It has already upped the capacity of its Philadelphia refinery from 85,000 bbl. of crude a day before the war to 112,000 bbl.; it plans a further increase to 117,000 bbl. for next year. Total cost: more than $20-million.

Gulf Oil Co.'s expansion program is also among the biggest in the area. Present crude capacity at its Philadelphia refinery is 76,700 bbl. a day. A topping unit with a capacity of 30,000 bbl. a day is being built; it's scheduled to go into operation by 1950. Gulf won't discuss cost, but rumors in the industry are that it is investing more than $20-million in the new unit.

Socony-Vacuum Oil Co. has a refinery at Paulsboro, N. J., with a prewar crude capacity of 47,000 bbl. a day. By the end of next summer, that will have risen to 64,000 bbl. a day. The company's total allocation for expansion, all over the country, is about $40-million; Paulsboro will get a good slice.

Sinclair Refining Co. has installed a $15-million catalytic cracking unit, plus necessary accessories at Marcus Hook. When this unit was finished last March, the refinery's crude capacity was stepped up from 65,000 bbl. a day to 70,000.

California Refining Co., subsidiary of Standard Oil Co. of California, has just moved into the area. Right after the war it bought an interest in Barber Oil Co.'s 15,000-bbl.-a-day refinery at Perth Amboy; two months ago it bought 100% ownership. Land is available for expansion, but the company isn't planning any right now.

CROP DUSTING and other advances brought science to the farm. Now a group of professionals are . . .

Bringing Business Methods to Farming

Farm managers enhance their own future by carrying the gospel of sound management principles to U. S. farmers.

Farm managers belong to a profession that has grown to maturity over the past two decades. But they still face a blank wall: "People don't know what I do for a living," they complain.

• **New Concept**—One obvious reason for this is simply lack of publicity about farm managers' particular specialty. But there's another, deeper one: The U. S. persists in looking on farming as a way of life rather than a business. And few farmers themselves are really in—or understand—farming as a business enterprise.

That problem will loom large this weekend at the national convention of the American Society of Farm Managers & Rural Appraisers in Chicago. The managers will focus on their own role in the farm economy—but they will also spend considerable time on the over-all importance of good business management in farming.

• **Rapid Growth**—Basically the farm manager operates much like the management and industrial engineer. His profession got its big start in the depression of the 1930's, and is now expanding rapidly with each new crop of agricultural-school graduates. You will find most farm managers in the Corn Belt, but now they are fanning out rapidly in the Far West as well.

In the society alone there are 500 farm managers, who supervise an impressive chunk of U. S. farm land: some 6-million acres on 17,000 farms. The society also has another 300 members, mostly appraisers plus a sprinkling of college professors and research men.

• **Exclusive**—But these hardly comprise all the "farm managers" in the country. The society bars the so-called "curbstone farmers"—unqualified real-estate operators, whom the society looks on as mere rent collectors.

The professional farm manager, on the other hand, undoubtedly stressed agronomy in his college work. He can advise you on every phase of farming, from building construction to artificial insemination.

His clients include businessmen who have bought land for investment; retired farmers; heirs waiting for the distribution of an estate; anybody's Aunt Minnie—who doesn't know anything about farming except that she inherited some land.

• **Flexible**—Arrangements are tailored to suit the client. They can range from merely (1) a plan of operation, through (2) consultation, to (3) full management. If he takes over the full job, the manager hires the tenant, sets up the crop plan, selects the seed, supervises the field work and marketing, pays the taxes, orders farm equipment, pays all bills. At stipulated intervals he sends the owner a check for the proceeds—minus his own fee.

As you might expect, most of the farm-management companies are one or two-man affairs which handle about 70 local farms. But there are some big operators, too. Here are two of the biggest and best known:

The Farmers National Co., Omaha, manages 1,305 farms in eight states (mainly Iowa and Nebraska), has some 50 employees, maintains 24 field offices. The company dates back to 1929.

Doane Agricultural Service, Inc., works out of St. Louis, has offices in six other cities, employs 125 people, covers 15 states from Mississippi to Minnesota. It works in the main on a monthly-payment basis; fees range usually between $25 and $100, depending on the farm. It also publishes the Doane Agricultural Digest, a semimonthly publication.

• **Research**—Farm-management services give clients more than just day-to-day direction. Take the question of how much money should be sunk into a dairy barn. To avoid overbuilding—a common fault among dairy farmers—Doane has worked out a formula based on production records of more than 21,000 cows. These show that 10% of the gross income can safely go into building costs. Using Doane's yardstick, you can figure that a herd of 10 cows will pay for and maintain a $3,750 investment in dairy buildings.

• **Missionary Work**—There's a hard-headed reason for this spirit of evangelism.

Even in a prosperous farm year such as 1945 (last U. S. census) more than 4.2-million farmers produced less than $3,000 worth of products. Such farms obviously don't offer a profit to the professional manager. His future lies largely in the top 8.7% of farmers (500,000 of them) who get half the total farm income.

Due to mechanization and technological advances, the number of big farms in the U. S. is constantly increasing. But the business concept of farming hasn't kept pace with this growth. Farm managers must work hard to convince farmers of the benefits that sound business management reaps—increased output, greater profits, widened opportunities.

To clinch the point, The Farmers National exhibits a consolidated statement of rental income from Iowa and Nebraska farms under its management during the depth-of-depression year, 1932: It shows an average net return to owners of 3.5% on appraised value of the farms.

Another injun bites the dust

A quick count of the notches on that trusty six-shooter and our ferocious little paleface has the figures for his day's work.

Getting figures, in business, is more involved. There's endless posting and filing, elaborate bookkeeping, error-productive copying. But our Comptometer Peg-Board Plan has changed all that. For this simple and direct plan makes *original* postings yield *final* results. Enter an item once, and it need *never be recopied!*

The Peg-Board Plan (working hand-in-hand with the speedy Comptometer machine) sharply cuts accounting expense as it provides timely, accurate figures on such tasks as: sales, payroll, cost, material, incoming orders, stock control. And no elaborate equipment is necessary.

Send for our folder—"Peg-Board Accounting"—learn the advantages of this method. Or call your nearest Comptometer representative.

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ADDING-CALCULATING MACHINES

Made only by Felt & Tarrant Manufacturing Co., and sold exclusively by its Comptometer Division, 1733 N. Paulina Street, Chicago 22, Illinois.

N. W. AYER & SON

BUSINESS BRIEFS

Rohm & Haas has consented to the antitrust decree banning connections with I. G. Farben and Imperial Chemical Industries. This opens up a flock of acrylic (plastic) products patents.

•

Chicago may get another natural-gas pipeline in 1951 if FPC agrees. Mississippi River Fuel would spend $90-million to bring in Louisiana gas.

•

Maremont Automotive Products now dominates the spring-leaf replacement business for motor vehicles. Purchase of E. R. Merrill Spring Co. gives it combined annual sales of $16-million.

•

Cudahy Packing is suing Standard Brands for trade-mark infringement. Claims that S. B.'s new yellow, blue, and red oleomargarine carton is too much like its own.

•

Advertising literature, even though it's shipped separately from the product, may be a "label" subject to the Food & Drug Act. Supreme Court said so in a case against Lelord Kordel, health-food lecturer.

•

New plants: Industrial Rayon will build a new plant near Pleasant, W. Va., for the continuous-processing of rayon (BW—Jan.27'40,p46). Hercules Powder plans a new anhydrous-ammonia unit at Hercules, Calif.

•

Price of industrial alcohol has plummeted from 87½¢ to 54¢. And it may go to 35¢ next year thanks to lower prices for molasses (the chief ingredient) and increasing supplies of synthetic alcohol.

•

Output of cold rubber at the Port Neches (Tex.) plant (BW—Oct.16'48, p74) will be doubled. RFC gave B. F. Goodrich permission to up it from 15,000 to 30,000 tons a year.

•

New Orleans port boss, Edward O. Jewell, quit after six years (BW—Jun. 28'47,p38). He is going to the Norfolk (Va.) Port Authority to do the same management and promotion job there.

•

Steel shortage kept the Plymouth Division closed through this week. Reason: Its body supplier, Briggs, shut down for lack of sheet steel.

•

Merger of two New York companies —Combustion Engineering and Superheater—will produce Combustion Engineering-Superheater, Inc. Combined net income for the first nine months of 1948: $4.9-million.

Costly Collegians

College trainees that didn't make the grade cost 247 companies $1.3-million, survey shows. Bad selection at fault.

A good many companies count on tapping college graduating classes for bright young trainees. A report out last week may make them take a second look at their selection techniques. A management-consultant firm finds that 42% (490) of college trainees studied proved unsatisfactory, or left their jobs, before the end of one year.

Chicago's Robert N. McMurry & Co., headed by Dr. Robert N. McMurry, made the study. It covered 1,167 college trainees in 247 companies.

• **$1.3-Million Lost**—According to the report, those 490 young men represented a total of $1,347,500 out the window—on the basis of a median outlay of $2,750 a trainee for the year.

Thus, one company said that only 16 of 31 college trainees were still on the job at the year's end. The actual loss was $41,250—and the company still had to fill the gaps in its ranks.

• **Faulty System**—But the report indicates that the fault may not lie so much with the college graduate as with the system of choosing a trainee. Dr. McMurry feels the results show that you can put too much stress on academic record, high I.Q., and good appearance. Even with standard psychological tests, you may not pick a winner.

Dr. McMurry concludes that the good college trainee has seven basic personality traits to his credit: stability, industriousness, perseverance, loyalty, self-reliance, ability to get on with fellow workers, willingness to lead and take responsibilty.

But not every job needs the same stability and ingenuity. If you're to have a sound hiring system, says McMurry, you should evaluate the degree of emotional maturity an applicant has in relation to the job he wants.

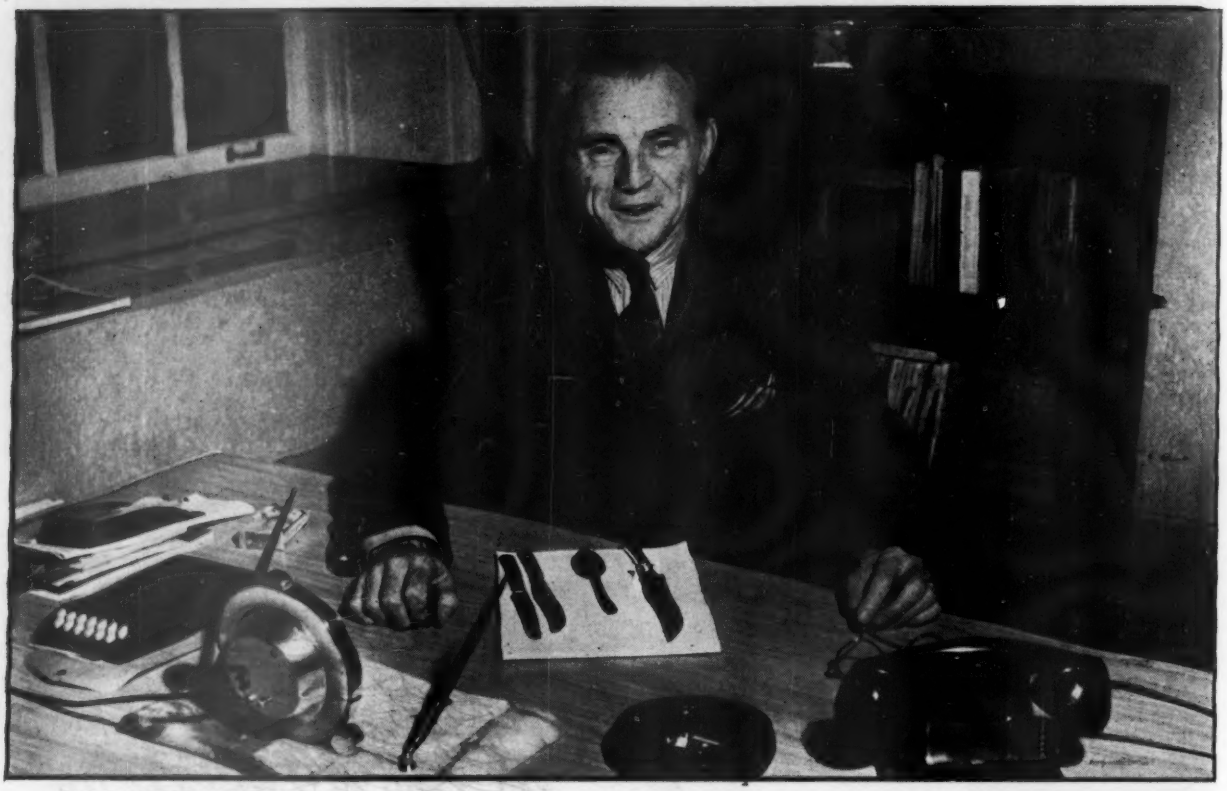
• **Suggestions**—Here's what the doctor recommends—in addition to the usual technical qualifications:

(1) A clear definition of personality qualifications for a job.

(2) A patterned interview that discounts the interviewer's personal biases.

• **Success**—Companies that have picked their trainees on lines McMurry suggests report almost uniform success.

Studebaker Corp., for example, chose 92 trainees by these techniques between January, 1947, and June, 1948. Of the 92, only two left: One went back to Harvard for more graduate work; the other resigned because of illness.



OPERATING CHIEF Miles E. Robertson rarely closes the door to his family of silvermakers at the plant where he is . . .

Putting Oneida's Employees First

Big silvermaker believes in sharing profits with everyone in the company. It pays off in loyalty that unions can't crack.

Next week's mail will carry letters to more than 3,700 employees of Oneida, Ltd. They will announce a new blanket insurance plan for them and their dependents. The scheme wraps group term life, sickness, accident, surgical and hospitalization benefits in one bundle. Best of all from the employees' point of view: The company foots half the bill.

• **A Good Deal**—To the employees, this plan is simply the latest in a long list of reasons why they think of working at Oneida as a good deal. During its first 100 years, employee welfare has ranked high among company objectives. The

EMPLOYEES' CENTER where they bowl, dance, run theatricals after work is provided by company

MODERN STORES supply Oneida's families with all needs along main street of Sherrill, N. Y.

TWENTY-FIVE-YEAR EMPLOYEE William Griesmyer supervises final polish of knife blades

YOU CAN BE SURE . . .

that Westinghouse Lamps are of the highest quality

YOU CAN BE SURE . . .

that you can buy Westinghouse Lamps everywhere, and get them promptly

AND YOU'LL NEVER DO BUSINESS WITH NICER PEOPLE

We're patting our distributors on the back when we say that, not ourselves. For they're top-notch in the service they give lamp buyers. You'll say the same, we bet, once you do business with them. If you don't know who your distributor is, write Lamp Division, Westinghouse Electric Corp., Bloomfield, N. J.

YOU CAN BE SURE...IF IT'S

Westinghouse Lamps

THE NAME YOU KNOW IN

philosophy is that employees who contribute to Oneida's prosperity deserve a share of the returns.

So the company has given better-than-average wages, extras for long service, cost-of-living bonuses, profit-sharing bonuses, aid in home purchasing, recreation facilities, and other advantages. This has paid off in such a strong mass loyalty that unions have found themselves hard pressed for selling points. And the work force has remained relatively stable: Nearly one-fourth of those now employed have been on the payroll 25 years or longer.

• **Plants**—Oneida is now winding up its centennial year. It has grown into the second largest manufacturer of table silver in the world. Its main plants are located at Sherrill, a small city across the creek from Oneida in the picturesque Finger Lake region of western New York. Other plants have been built at Niagara Falls, Ont., and Sheffield, England.

In addition, a subsidiary, Oneida Products Corp., now builds bodies for school buses at Canastota, a short distance from Sherrill.

• **The Community Spirit**—The company has come a long way from its humble, frugal origins. Oneida began in 1848 as a religious experiment in communal living. The leader of this "communistic" group was a New England preacher, John Humphrey Noyes. He settled in the township of Oneida after an unsuccessful community experiment at Putney, Vt.

Noyes' group first went in for farming. Thrifty, industrious, and resourceful by necessity, the community succeeded. Men and women alike shared the chores. They cut down hardship by perfecting labor-saving devices.

• **Manufacturing Starts**—A few years later the group applied its ingenuity to manufacturing. The first product was a successful animal trap designed by one of the community members. Later, the members canned fruits and vegetables, made traveling bags, spool silk, and iron chains.

But the most famous and lasting production of the Oneida Community, as the group was called, was its silverware for the table. The first Oneida silverware appeared in 1874 at Wallingford, Conn.—a silver center where an offshoot of the parent community had been set up. By the early 1900's, the trade mark Community Silverplate was firmly entrenched. Its success was so great that it pushed other manufacturing activity at community plants into decline.

• **Incorporation**—Meanwhile, a major change of heart settled over the community. In 1880, it gave up the communal way of life. The manufacturing enterprise was incorporated as Oneida Community, Ltd. Ownership of the shares was concentrated among those individual members who previously had owned all community property collectively.

Noyes' principles continued to influence Oneida Community, Ltd. and later the reorganized Oneida, Ltd. His son, Pierpont B. Noyes, became the guiding spirit of the company in 1910. He carried on the philosophy of sharing which he had been first fed at his father's table.

• **Ownership**—Today the dominant ownership is still in the hands of those concerned directly with Oneida's day-to-day affairs. Of the 225,000 shares of outstanding common stock, less than 30% moves in over-the-counter trading. The rest is held by descendants of the original community families, or by employees. And many are both.

Pierpont Noyes believes no one should become wealthy from the activities of Oneida. That's why, the company says, its management salaries are a third to a half of what major competitors pay for similar jobs, while factory and clerical wages are above average. Noyes' approach: The important

IT ALL BEGAN at Mansion House where John Humphrey Noyes and his community settled in 1848. Religious "communistic" experiment is now big business. But . . .

thing is for all connected with the enterprise to lead a full life.

• **Benefits**—Translated into action this means:

(1) Average weekly take-home pay of $71 for men and $52 for women (including five to 10 hours of overtime).

(2) Automatic premiums for length of service added to regular earnings—5% after one year, 6% after two, 7% after three, 8% after four, 9% after five, 10% after 10, and 11% after 20 years.

(3) Beginners' bonuses, to raise the level of take-home pay while learning.

(4) Profit bonuses. Last year, the bonus distribution totaled $859,000—about 43% of net income. To date this year, each employee has had a bonus of two weeks' pay, may get another two or three weeks' gift before the year ends.

(5) A $400 cash handout for home-building plus a $500 discount on purchase of a company-owned building lot in the plants' vicinity.

(6) Recreation and other privileges calculated to support the slogan: "A friendly place to work."

• **Employees' Performance**—In return, the company expects good performance from its employees. Most factory jobs are run on piecework rates governed by frequent job evaluations and time-study. But each job has a guaranteed minimum. Employment opportunities are good. There's been steady year-round work at Oneida (except for a brief conversion-to-war dislocation) since 1932.

Founding families still control most of the top spots. Two-thirds of the directors are direct descendants or in-laws. But recently many "outsiders" have come up to management level from the working ranks.

• **Net Income: $2-Million**—The company's four trade-marks—Heirloom Sterling, Community Silverplate, Tudor Silverplate, and 1881 Rogers Silverplate—are well established. They're advertised regularly on a budget averaging $1-million a year.

Oneida is a money maker. Net income last year after taxes was over $2-million. Gross income from sales and the costs of operation are kept dark, to hold major competitors in ignorance. But the profit from operations last year surpassed $3.2-million. As a privately owned company, Oneida doesn't have to register its full statement with the Securities & Exchange Commission. Its last report, however, lists Oneida Ltd.'s capital at $5,168,750 and surplus at $5,935,451. Cumulative earned surplus from January, 1933, to January, 1948, totaled $4,897,066.

• **Modernization**—Since the war, Oneida has modernized its plants to make them ideal working environments. Scientists and technicians are constantly at work perfecting machines for easing manual

work. And during the coming year, Noyes has announced, there will be more plant expansions.

Oneida's sales and administration forces work in an ivy-covered administration building whose Gothic design gives it a college-campus air. Across the way is The Mansion House, the home where the original community members settled in 1848. It now serves as a combined guest house for visitors to the company, dining room and apartment hotel for several Oneida employees and retired descendants of the original group. Though many additions have been made to The Mansion House, the early quarters remain.

• **Management**—Chief in the active management of the company today is Miles E. Robertson, P. B. Noyes' son-in-law. In his role as general manager, Robertson is operating head. He told BUSINESS WEEK that the company plans greater mechanization of the silvermaking process and improvements of the product. Moreover, the company plans include a broader development in two qualities of stainless steel flatware in 1949. It's now a minor but growing part of the business.

Heirloom is a wartime addition. Its trade-mark was acquired when Oneida purchased William A. Rogers Co. of Niagara Falls. Oneida had always planned a sterling line. When the war came and the making of silverplate was halted, the company introduced its Heirloom Sterling while converting most of its facilities to the production of war items.

• **Question Mark**—The big question mark in Oneida's future is the subsidiary at Canastota. Oneida Products Corp. was formed in February, 1946, as an outgrowth of the company's war work. In the home plant, that work included making gasoline-jelly bombs, surgical instruments, bayonets, rifle sights, parachute parts, silverplated aircraft engine bearings, steel-base government flatware.

To this impressive list, Oneida wanted to add bomb shackles and photographic trailers. Oneida leased the defunct Rex Body Corp. plant at Canastota to make these items. Experience at Canastota led Oneida to modernize its home plants and also take on a new industrial expansion.

• **Products**—The subsidiary is run by W. C. Coburn who has full authority, responsible to the parent concern through his board of directors. Coburn is now building school bus bodies for the major bus-chassis makers. Since July, 1947, his company has been out of the red and turning in a small profit, which is consolidated with Oneida, Ltd.'s earnings.

The subsidiary employs 600. Coburn plans to run it up to 1,200 within the next nine months, boost production to include panel-truck and city-bus bodies as well as all kinds of metal formations using materials up to ¼" thick.

• **Capitalization**—Oneida's subsidiary is capitalized at $3-million. Oneida Products Corp. has allocated $1.7-million to rehabilitation and expansion of the old Rex plant.

While it looks as though Oneida Products Corp. is here to stay, some of the descendants of the original families are grumbling. They believe Oneida should stick to the silverware business and leave other things alone.

• **Labor Comes In**—The reason may be that the C.I.O. United Auto Workers has organized the Canastota plant. The theory is that there's no room for a union under Oneida's sharing principles. Oneida promises to bring its employees more than any union can win for them. But it insists that those promises cannot be fulfilled unless management and employees work them out together without the intercession of an outside agency.

FRIENDLY, INFORMAL SPIRIT remains long after "communistic" living was abandoned. Personnel directors meet employment seekers without a stiff front

NEWSPAPER ADS like this have played a big part in . . .

Selling Business a City

Rochester N. Y. Dept. of Commerce has brought 1,000 new products to city distributors in two years. Now it aims to get manufacturing franchises from West Coast for local industries.

For two years the Rochester (N. Y.) Dept. of Commerce has been doing a bang-up job of selling the city to business. Within that time, it has helped manufacturers find distributors in the city for more than 1,000 products. These products in turn have boosted sales in the area by some $1.5-million to $2-million a year.

This week the department is in the midst of a much bigger campaign: It is trying to persuade West Coast manufacturers to let Rochester industries turn out their products on a franchise basis.

• **The Brains**—Behind all this activity are two men. The first is Harold S. W. MacFarlin, Rochester's commissioner of commerce and former advertising man. When he was appointed by the city manager two years ago, he promised that his department would aid small business.

He hired Harold S. Rand (picture, page 40) to carry it out, made him assistant commissioner in charge of public relations. To back him up, the department began plugging the department's aim with this slogan: "In Rochester, Government Helps Business."

• **Distributors**—To prove it, Rand went to work on the distributor angle. He figured that a lot of small manufacturers of new products had trouble getting distributors. That's because distributors tend to be interested more in established products. Rand decided he could beat this tendency with a little salesmanship at both ends.

First, he cased all the city's distributors for the lines they handled, what they could logically add, and their reliability. Next he ran ads in metropolitan papers inviting manufacturers who wanted Rochester outlets to get in touch with him. The responses poured in; about all Rand had to do then was put the manufacturer and would-be distributors in touch with each other.

• **Franchise Plan**—That did not end Rand's efforts to bring more business to the city. He is now running ads in West Coast newspapers under the slogan: "Try the Rochester Plan."

The ads are aimed at West Coast manufacturers. Rand figures that high freight costs keep many of the westerners out of the eastern market. Freight

CITY SALESMAN Harold S. Rand is bringing more business to Rochester

could either eat up the margin of profit of many items made out West, or else push the price too high for easterners to buy. Rand's solution: Let Rochester industries produce the goods for the East under franchise. That would put the westerners' products on sale under their brand name and wipe out the transcontinental freight charge.

• **Failure**—Whether this effort will be successful, nobody knows yet. But Rand hopes it won't turn out like one of his projects. He had offered to find manufacturers in Rochester who would produce newly invented items. His ads brought a swarm of replies from inventors—but there was always something wrong with them. Many were crackpot ideas; many more had a Rube Goldberg quality promising little success.

Some, of course, looked practical enough to go over big. But the trouble here was that a lot of inventors were so afraid of getting gypped that they wouldn't take the necessary first steps. And even those inventions which did get into production involved so much effort and ran into so many difficulties that it was hardly worth while.

HIGHWAY HITS MERCHANTS

The State of Maine's $20-million, North-and-South superhighway has been open to traffic for nearly a year. In that time it has pulled about 1-million vehicles away from parallel Route No. 1—thereby putting the skids under millions of dollars worth of business investment.

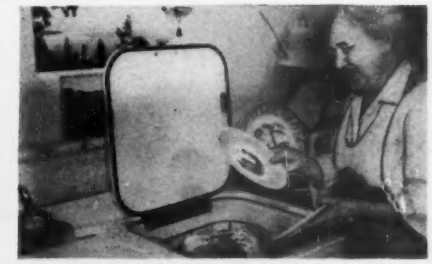
Last week the owners of hotels, restaurants, tourist cabins, and filling stations along Route 1 were trying to combat the loss of the transient trade which means their livelihood. They have banded together, formed the Southern Maine Route 1 Assn. to publicize their coast route. Through it they hope to force maintenance work on it, establish information booths, and erect signs.

Folks, Kind Neighbors, Outstanding Farmers"

said the Governor of their state about the Browns, whose Orleans County, N. Y. farm has been in the family since 1804.

6th-generation Browns enjoy the creek up which ancestor Elijah pushed his bateau in 1804 to settle in western New York.

Besides 15 acres of cherries, the Browns have 140 of apples, 60 of quinces and 20 acres each of pears and prunes.



Grandma Brown takes readily to automatic dish-washer, garbage disposer, and other electric devices as they come along.

Son Robert's flair for invention and mechanics is "implemented" by a well-equipped, up-to-date machine shop.

Grandpa Brown was one of the first orchardists to spray his trees, his first spray rig a barrel and hand pump.

The two families now on the land live far better than the Brown forebears—and the countryside is a better place thanks to their living there.

Country Gentleman

DECEMBER

2,300,000 circulation concentrated among the "top half" farm families who receive 90% of the nation's entire farm income.

PRODUCTION

PILOT PLANT: Here "char" is treated with steam and oxygen as one step in Pittsburgh Consolidation Coal Co.'s coal-gasification process. Immediate purpose is . . .

To Test Synthetic-Fuel Costs

Someday we'll have to make liquid fuel from coal. Process is too costly today. But Consolidation is trying to determine point at which it will be economical; also, how to use byproducts.

Synthetic fuel from coal was topic number one this week for production men. Here's what was happening:

(1) The Bureau of Mines announced that the first tonnage oxygen plant to be used for coal gasification was just getting into operation at Louisiana, Mo. (A tonnage plant is one that produces oxygen from air at the rate of at least a ton an hour.)

(2) A General Motors Corp. researcher, T. A. Boyd, predicted that the chemist would be the key man in the future of fuels, and that "the making of gasoline is going to be a chemical industry to an even greater degree than the petroleum-refining industry today."

(3) Pittsburgh Consolidation Coal Co. had its pilot plant working on gasification of coal at Imperial, Pa. (BW—Apr.5'47,p48).

• **Meaning**—All this activity doesn't mean that petroleum reserves are about to be exhausted. It does mean, however, that industry will soon have available basic facts on how much such synthetic fuels would cost, and what kind of useful byproducts could be expected.

With that kind of data, plants can be planned to meet the petroleum facts of life: (1) Our need for crude petroleum and its products has begun to outstrip our natural reserves; and (2) there is no assurance of sufficient supplies of foreign crude in the event of another war.

But Pittsburgh Consolidation sounds a warning here that's well worth heeding: As now projected, the over-all costs of conversion of coal to synthetic gasoline are not competitive today; commercial use of the process will depend on future price factors in fuel markets.

• **Plant**—Consolidation's plant was built, and is being operated, in cooperation with Standard Oil Development Co.—a subsidiary of Standard Oil Co. (N. J.). According to Joseph Pursglove, Jr., Consolidation's vice-president in charge of research and development, gasification (production of liquid or gaseous fuels from coal) is only one of the plant's interests.

Basic research efforts are also being aimed at carbonization, and at chemical and processing studies on the tar that carbonization produces. And Consolidation's work so far indicates that carbonization, because of its industrial implications, warrants at least as much attention as the more widely publicized gasification.

• **What It Is**—Carbonization is actually a primary step in the making of synthetic fuel from coal. The process is similar to that used in making coke, but it is carried much farther. Here's how it works:

Coal is heated to about 800F, and held there. The heat forces off all the volatile components. So, finally, you get three things: (1) a residue, called char, which is very high in carbon; (2) a tar; and (3) a gas of high heating value.

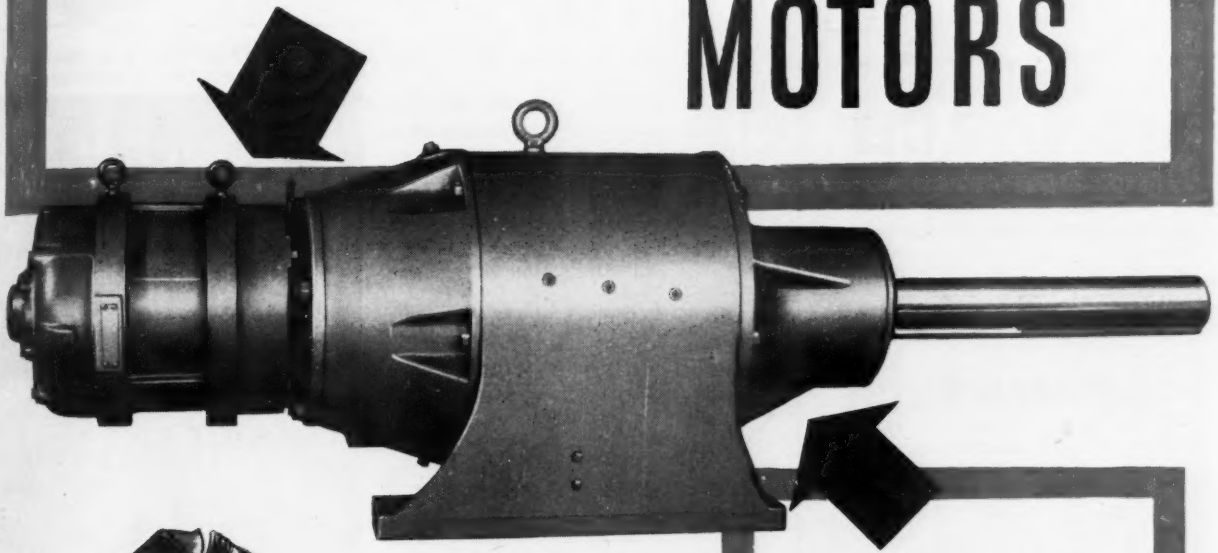
• **Methods**—Several different ways of achieving carbonization are being tried by Consolidation; one is its Disco process (BW—Jun.14'47,p66), in which lump coal is used as the basic material.

In another, the company uses crushed coal, and the "fluidized solids" technique. When solids such as coal are ground up very fine, the small particles behave like a liquid. This assures even heat distribution throughout the mass, and a faster reaction. Result: The process can be accurately controlled to produce desired proportions (within limits) of the three end products: char, tar, and gas. And the char is almost equal in heating value to the original coal.

• **Char's Uses**—The char can be used in several ways: It can be burned under boilers in industrial plants. (Consolidation has exploratory tests under way at Battelle Memorial Institute, Columbus, Ohio, to develop efficient ways of burning char under boilers.) It can be used as fuel for domestic heating. Or—and this is Consolidation's big angle today—it can be used as a feed material for the gasification process.

In gasification, the char is reacted with steam and oxygen to produce "synthesis gas" (a mixture of carbon monoxide and hydrogen similar to ordi-

HOWELL *industrial type* MOTORS



Here's a reliable gear-motor combination you'll want to look into.

D. O. JAMES GEAR REDUCER

Why?

Because the motor is an industrial type motor built by Howell and backed by 33 years' experience in building industrial type motors exclusively.

The gear reducer is built by the D. O. James Manufacturing Company, specialists in their field with more than 50 years' experience.

The combination makes an integral packaged unit with the motor flange-mounted to the reducer, yet with a flexible coupling so that motor and reducer can readily be separated for maintenance.

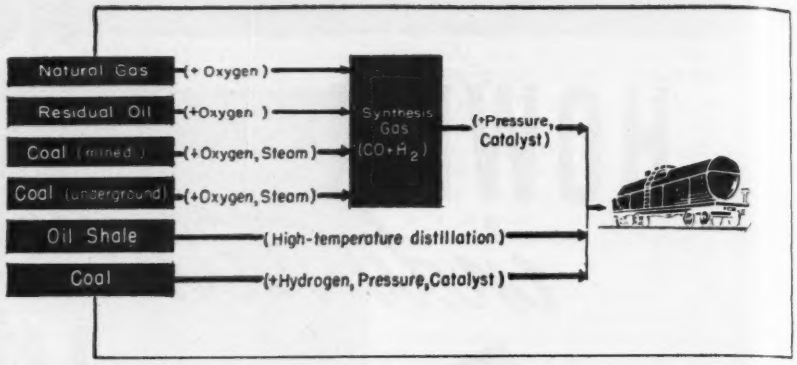
For a modern, economical means of obtaining relatively low speeds from constant speed motors in your business, be sure—buy Howell!

RED BAND MOTORS
HOWELL
SINCE 1915

For geared motors, motors with unique electrical characteristics, special mechanical form, or standard motors (with any type of enclosure) from 1/6 through 150 HP, consult your HOWELL representative.

HOWELL ELECTRIC MOTORS CO., HOWELL, MICHIGAN

MANUFACTURERS OF PRECISION BUILT, INDUSTRIAL TYPE MOTORS



PROCESSES for making synthetic fuel from coal: Emphasis today is on these six

nary water gas). This gas, too, has commercial possibilities: It can be sold as a low-B.t.u. industrial fuel. It can be enriched to the equivalent of manufactured city gas. Or—and, again, this is Consolidation's big angle today—it can be fed to a Fischer-Tropsch synthesis reactor for the production of gasoline and chemicals.

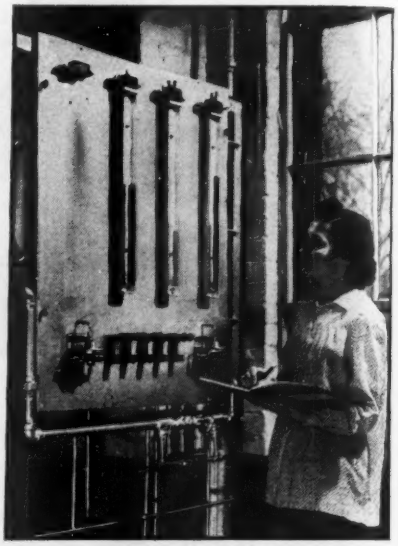
(Char is by no means the only feed material for the gasification process. Consolidation is also experimenting with fluidized coal as a direct feed.)

• **Tar's Uses**—The crude tar produced by the carbonization process is getting a lot of attention from Consolidation's researchers. It is similar to ordinary coal tar, but appears to be even richer as a chemical raw material. It can be burned, as is, as a liquid fuel. But that is a tremendous waste.

The tar's commercial value is greatly increased if (1) it is refined to produce better fuels to precise specifications, or (2) it is processed into marketable coal-tar chemicals. The research problem is to find out exactly what is in the tars that are produced by carbonization under different conditions; then to figure out ways to separate the valuable components.

• **Bureau of Mines Research**—While this work is going on at Consolidation, and at several other coal and chemical laboratories, the Bureau of Mines is continuing its own coal-synthesizing research at its demonstration plants in Louisiana, Mo. Its tonnage oxygen plant, about which it was bragging this week, is a "liberated" plant which was originally used by I. G. Farben-Industrie for making acetic acid and other chemicals at Hochst, Germany. The plant, which extracts oxygen from the air, has a capacity of 23,000 cu. ft. (one ton) of 98% oxygen per hour. A 50,000 cu. ft. storage tank has also been constructed at its plant.

The economics of using oxygen to make gasoline from coal depend on the cost of the oxygen. The recently erected unit, as a source of tonnage oxygen, will help evaluate those costs. The bureau puts it this way: Separation of oxygen from air isn't new, but for synthetic-gasoline making, the amounts of oxygen needed and, thus, the size of producing plants required, are much greater than previously contemplated in this country.

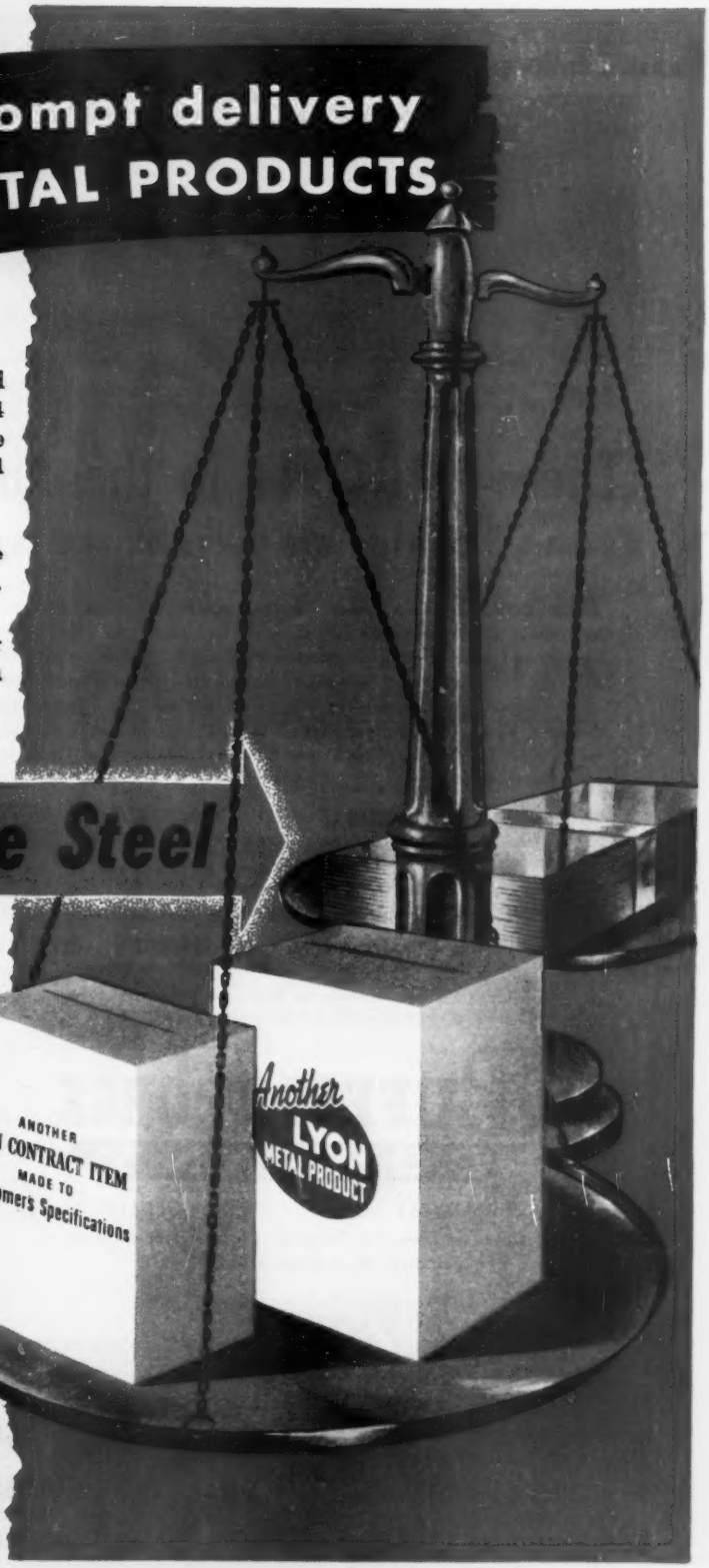


MEASURING GAS FLOW in coal-carbonization studies. Basic theories are being tried out in the pilot plant; when proved, they will be applied to large-scale carbonization plants

SCHOOL FOR MAINTENANCE

One way to keep your customers is to make sure they know how to service and maintain your product. Gould Storage Battery Corp., Trenton, N. J., has just finished the first of a series of "one-week schools" aimed at doing just that. The school teaches better techniques of storage-battery maintenance and repair to engineers, supervisors, and foremen representing industries that are big users of lead-acid batteries. The first "school" had coal-mining technicians for students. They got a five-day capsule education: lectures by Gould engineers, laboratory projects, written and oral exams, and "diplomas."

How to get prompt delivery on LYON METAL PRODUCTS



● Many LYON customers have found it possible to supply us with steel in 12 to 24 gauge sheets. In such cases, we will buy the steel from you and ship the pound-for-pound equivalent in

EITHER

... any selection of LYON standard products (see partial list below) at regular published prices ...

OR

... assemblies, subassemblies, parts, etc., for your products—to your specifications—in an even wider range of gauges—8 to 30.

In other words . . .

YOU Furnish the Steel

LYON WILL MAKE THE PRODUCT

For complete details, write or ask your nearest LYON Dealer or LYON District Office.

LYON METAL PRODUCTS, INCORPORATED

General Offices: 1110 Monroe Ave., Aurora, Illinois
Branches and Dealers in All Principal Cities

A PARTIAL LIST OF LYON PRODUCTS

• Shelving	• Kitchen Cabinets	• Filing Cabinets	• Storage Cabinets	• Conveyors	• Tool Stands	• Flat Drawer Files
• Lockers	• Display Equipment	• Cabinet Benches	• Bench Drawers	• Shop Boxes	• Service Carts	• Tool Trays • Tool Boxes
• Wood Working Benches	• Hanging Cabinets	• Folding Chairs	• Work Benches	• Bar Racks	• Hopper Bins	• Desks • Sorting Files
• Economy Locker Racks	• Welding Benches	• Drawing Tables	• Drawer Units	• Bin Units	• Parts Cases	• Stools • Ironing Tables

PRODUCTION BRIEFS

Motor plant, G.E.'s newest, opened at San Jose, Calif. Will handle production of single-phase capacitor integral motors. Cost of plant construction: $3-million.

•

Rush order for krypton-gas airfield lights has gone to Westinghouse. Air Force wants 42 of them for Berlin air lift. Light flash will pierce 1,000 ft. of fog.

•

Packaged soybean mill takes extraction process to the farm. Solvents used in the one-floor unit won't burn or explode. Iowa State engineers developed it; Minneapolis' Crown Iron Works will make it.

•

Isotope handbook, published by Commerce (PB 93615), covers nuclei and radioactivity, measurement of isotopes, biological and medical applications. Costs $20 a copy.

•

American Locomotive's Canadian subsidiary, Montreal Locomotive Works, has signed a diesel-production pact that allows Dominion Engineering Works to produce Alco's 1000-hp. engine.

•

To cut steel wastage, M. W. Kellogg has developed a new metallurgical technique that keeps cavities from forming while metal cools. "Electric hot topping," Kellogg's name for the process, is available under license.

•

Stewart-Warner has boosted its output of heating equipment by buying Heating Research Corp. It makes Saf-Aire convection-type gas heaters.

•

Standardized finishes for office furniture have been developed by the Wood Office Furniture Institute. Should make it easier for you to match the desk you bought a year ago.

•

Don't turn up your nose at low-grade manganese ores: North Carolina's Dougherty Chemical Co. has a process for getting manganous sulphate from them—an important step in extracting high-grade values.

•

Electrochemical laboratory for experiments and service work in electroplating and polishing has been opened by Hanson-Van Winkle-Munning at Matawan, N. J.

•

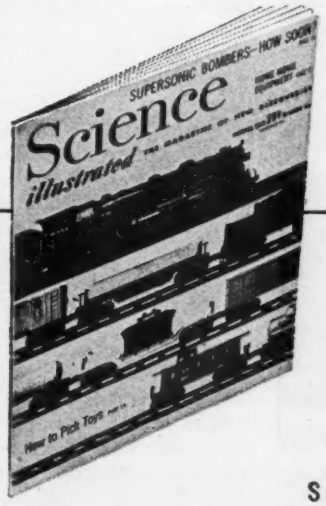
Four shades of gray paint for industrial machinery have been recommended as standards by American Standards Assn. They're being passed around now for comment and trial.

...and what a difference in SALES!

Not merely *more* people—but *people with more money*. That seems to be the strategic target for 1949 media selection. Rising consumer costs and shrinking family budgets make it more important than ever to concentrate *your* advertising investments where the profit-yield is most promising: where family incomes are highest.

Far higher than average, SCIENCE ILLUSTRATED family incomes are substantially above those of the *non*-reader families *right next door*. By its unique editorial formula, this magazine assembles a selective audience that stacks high in all the factors that matter for '49: better education, occupation, product-ownership. But the solid difference in *buying power* pictured across this page is the prime clue to the greater *selling power* of your advertisement, placed in the active pages of SCIENCE ILLUSTRATED.

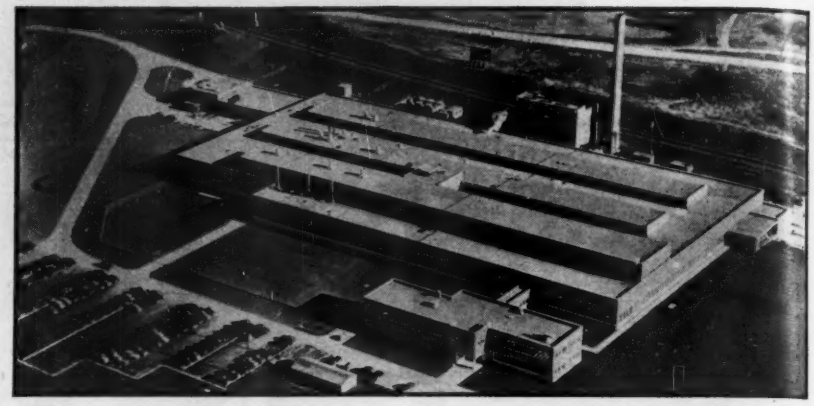
Remember the SCIENCE ILLUSTRATED *difference* . . . and concentrate for '49 in the market that's "*eager to know—and able to buy*".



means **ACTION**

Detroit San Francisco • Los Angeles • Boston • Atlanta

PICTURE REPORT



A BRAND NEW FOUNDRY gives American Brake Shoe Co. a chance to show how . . .

AUTOMATIC BUCKET CONVEYORS for furnace charging and other . . .

SAND AND WATER jet cleans castings

Labor Saving Machines Ease Tough Foundry Jobs

Will better working conditions (1) attract, and keep, skilled labor; (2) improve the product; and (3) slice production costs? American Brake Shoe Co. thinks so: Its new nonferrous foundry at Meadville, Pa., aims all its improvements at that goal.

At Meadville, the once grubby sand-handling job is entirely mechanical. Cores are baked electronically. Materials-handling equipment speeds work in the molding room. Conveyors, high-lift trucks, and portable scales help charge the furnace. Cleaning units do a blasting job on rough casting surfaces.

For workers' comfort, 20 power ventilators on the roof remove smoke and gases. Over 400,000 cu. ft. of air is drawn into the plant every minute.

Other features: electric precipitators that recover phosphoric acid from phosphorus fumes; crushing and flotation equipment that reclaims metal from ladle-skimmings and furnace slags.

To keep inflation out of power costs in the face of steadily rising equipment, construction, and fuel costs, public utilities and industrial plants are showing a growing preference for *One-Boiler-Turbine-Units. Ample evidence of this trend is revealed in a recent survey of central station and industrial power plant expansion projects. Nearly 75 per cent of all new units added since January 1947 and proposed up to 1951, are one boiler per turbine installations.

Success of this type of operation calls for an extremely reliable supply of steam—boilers that will stay on the line day in and day out, month after month. Supplying boilers that will measure up to this exacting standard of performance is an 80-year old story with B&W. This explains why a large percentage of the latest one boiler per turbine installations include B&W boilers.

Helping power plants to keep costs down is one thing long years have taught B&W to do well. Yet though old in experience, B&W remains young enough to have new ideas for engineers in all fields—a good reason to turn to B&W first with today's problems and tomorrow's plans.

N-32

BABCOCK & WILCOX

THE BABCOCK & WILCOX CO.
General Offices: 85 Liberty St., New York 6, N. Y. • *Works*: Alliance and Barberton, O., Augusta, Ga.

THE BABCOCK & WILCOX TUBE CO.
General Offices: Beaver Falls, Pa. • *Plants*: Beaver Falls, Pa.; and Alliance, Ohio

Water-Tube Boilers, for Stationary Power Plants, for Marine Service . . . Water Cooled Furnaces . . . Superheaters . . . Economizers . . . Air Heaters . . . Pulverized-Coal Equipment . . . Chain-Grate Stokers . . . Oil, Gas, and Multifuel Burners . . . Seamless and Welded Tubes and Pipe . . . Refractories . . . Process Equipment

Is It Producible?

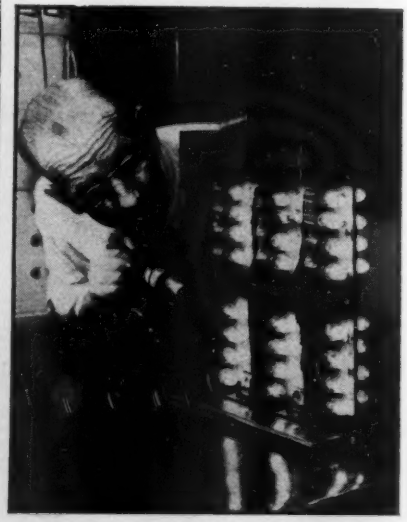
Answer to this question is now a factor in choosing Air Force designs. Opponents fear poorer performance.

Air Force officers last week were busy with their dictionaries. Their project: to find a definition, acceptable to them and to industry, of "producibility."

That word represents a new and important factor to be used in evaluating competitive designs for aircraft and equipment. The experts haven't nailed down their definition yet, but you might paraphrase the general idea this way: "Can this plane—or part—be made rapidly, efficiently, with existing equipment? Can production be expanded easily?"

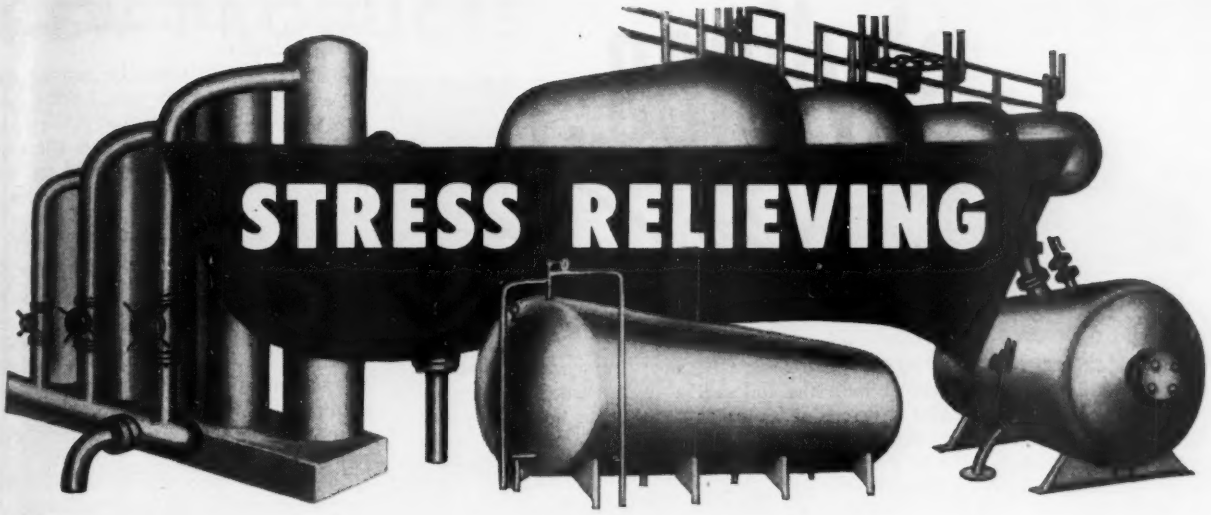
• **Strong Word**—When the official definition comes, watch out for it. It could be serious for your plant pocketbook; it will count heavily when your design for a plane, engine, or part comes up for acceptance or rejection.

The dictionary-probe started because the Air Force decided to add this new



Lamp Punisher

Shockproof pilot lights for electric ranges and radios take a rough beating at General Electric's Lamp Development Laboratory. To make sure the lights will take any punishment housewives can dish out, researchers worked up this "bump" test to simulate the slamming of oven doors, the banging of pots and pans on burners. Every six minutes a hammer's blow jars the lights on the tester; G.E. says the bulbs stand the grind for over 3,500 hours—equal to about 5 years of normal service. Lights for radio have to pass other physicals: Vibration, noise, and variable-frequency tests follow the bump ordeal.



Temperature Ranges Required for Pressure Vessels at BLACK, SIVALLS & BRYSON, Inc. Demonstrate Controllability of *GAS*

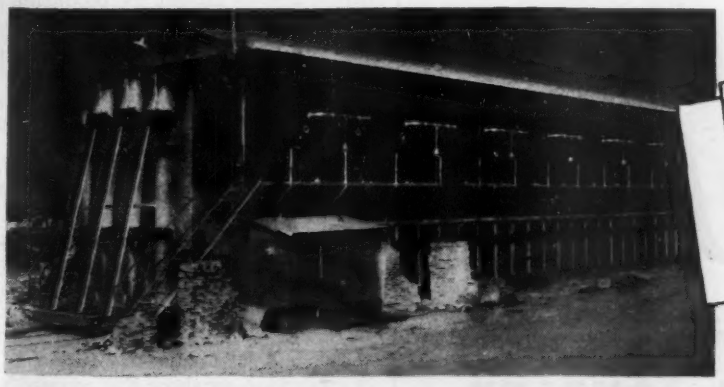
Safety codes govern many of the manufacturing and testing methods for pressure vessels. One of the most important processes, stress relieving, requires precise control of temperatures throughout the cycle—just the type of temperature control to be found in thousands of industrial applications of GAS for heat treating.

Specialists in the manufacture of pressure vessels depend on GAS for heat processing of all types. The pioneering firm of Black, Sivalls and Bryson, Inc., Kansas City, uses GAS in the manufacture of tanks, valves, pressure vessels and safety heads. President A. J. Smith says,

"Throughout the past 25 years we have depended on GAS to provide the exacting temperatures for our work. In many of our plants we have developed special GAS equipment; our large stress-relieving furnace at Oklahoma City is a typical example."

In this large furnace the GAS control system is arranged to provide temperatures up to 1200° F. for any time-cycle required. Automatic regulators and recording pyrometers assure maximum fuel efficiency while the flexibility of GAS is an important factor in maintaining production schedules on vital equipment.

Stress-relieving is just one of the applications of GAS for heat processing. You'll find hundreds of other uses for the productive flames of GAS—they're worth investigating.



MORE AND MORE...
THE TREND IS TO GAS
FOR ALL INDUSTRIAL HEATING

One of the largest stress-relieving ovens in the United States, this installation at Oklahoma City is 77' long, 12' wide, 18' high—Gas-fired and equipped with recording pyrometers.

AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE **NEW YORK 17, N. Y.**

P-6393

factor to its point-award system. That system is the basis in choosing between similar designs.

• **Scoring**—Up to now the scoring has worked something like this; 1,000 is perfect; the plane or device that gets a point rating nearest this figure gets the contract. Among points considered are performance, cost, maintenance problems, delivery, and the like.

Now "producibility" will be added; it will have a rating of 20% of the total (or 200 points). Thus, a manufacturer with a product of poor performance but high producibility might land a contract while a maker of a much better product, hard to manufacture, wouldn't stand a chance.

• **Industry, Too**—The Air Force isn't working alone on the problem. It is thrashing out the definition with industry. So far, this is the longwinded result: "Producibility is that attribute of a product which renders it capable of rapid, efficient, and expansible production with reference to the facilities in which it may be produced."

The Air Force and industry agree that the major components of producibility are: simplicity of shape, number of parts, ease of fabrication, ease of assembly, breakdown for production. Each of these components will get a share of the total 200 points possible on producibility in a new design.

• **Disadvantages**—Aircraft designers are not happy about this. They say that a definition would hamstring performance, particularly in a plane. For example, an extra wing joint might cost a jet fighter 20 mph. in speed; interchangeable flaps could cause increases in landing speed; extra strength around an access hole for a "standard" tool might mean extra weight. The Air Force says "yes" to all this. But the Air Force adds that a higher score on producibility can compensate for a lower score on performance.

The aircraft industry argues further that if you go all out for producibility you might sacrifice technical progress. The Navy Bureau of Aeronautics apparently agrees: It has no producibility requirement, buys the device with the highest performance regardless of how hard it is to make.

• **Lesson From Hitler?**—How well the Air Force idea will work out only time can tell. But opponents are unhappily certain about one thing: The Air Force is determined to accept inferior performance in return for definitely superior producibility. This, they say, didn't work out so well for Hitler. German rocket and jet fighters were more producibile than anything this country has yet seen. But they didn't stand up too well against the high-performance U. S. aircraft—which automotive engineers labeled "wonders of handmade bric-a-brac."

NEW PRODUCTS

Auto Porter

An automobile-towing device that can be hooked up to a passenger car or light truck is in production at Sparks-Withington Co.'s Automotive Division.

The Sparton Retriever is a heavy-duty, two-wheeled vehicle. It's designed to replace wrecking trucks on jobs where the damaged car still has two good wheels. Because it lifts the car from beneath the chassis, it avoids the damage that's sometimes caused when you tow with chains or cables.

The Retriever uses hydraulic power, applied through a steel channel frame, to lift the auto. Once the wreck is loaded, its weight is distributed evenly over the two Retriever wheels. The company says you can make sharp turns without whipping or swaying.

One man can operate the unit; it can be attached in a few seconds to any car or truck that has a trailer hitch. Beside its towing job, the Retriever can also be used for: (1) lubrication work; (2) brake adjustments; (3) tire changes. The manufacturer's address: Jackson, Mich.

• *Availability: immediate.*

Water Warmers

Kelvinator Division, Nash-Kelvinator Corp., is set to go with a new line of electric water heaters. Highlights: models in nine sizes; and an anticorrosion device as optional equipment.

The magnesium-alloy anticorrosion rod can be installed in any of the models. It's designed for areas where local water supply tends to corrode galvanized tanks. Electrochemical action between the rod and the tank causes the rod—instead of the tank wall—to break down. Heaters that have the rod carry a 10-year guarantee. The rods are replaceable.

Basement models of the heater are made in seven sizes, with capacities from 12 gal. to 82 gal.; table-top kitchen types are made in 30-gal. and 40-gal. sizes. Other features: immersion heating elements, 3-in. Fiberglas insulation. Kelvinator headquarters are at 14250 Plymouth Rd., Detroit.

• *Availability: immediate.*

Safe Light

Safety was the big goal of a new extension light at Neoline, Inc., 124 W. 4th St., Los Angeles 13.

To make the light completely sparkproof, engineers used non-metallic materials on all surface areas. Even the guard around the light bulb has no exposed metal parts. A triple-seal waterproofing makes the light safe for underwater operation.

Small in diameter (1¾ in.), the Neogard will fit any 2-in. opening. Weight is 4½ oz. Pyrex lamp is resistant to welding spatters and subzero weather; tungsten filament is braced for rough handling. Handle and heavy-duty cord (25-ft., 50-ft. and 100-ft. lengths) are made of oil-resistant Neoprene. The plug for the light can be locked fast to any outlet.

• *Availability: immediate.*

Fluid Steel

Lockrey Co., College Point, N. Y., is making a coating that it calls Liquid Stainless Steel. Company engineers say it's a mixture of microscopic flakes of stainless in a liquid plastic and solvent.

The coating goes on with a brush or a spray; it sticks to wood and metal and is quick-drying. The combination of the plastic and the stainless steel, Lockrey says, gives the coating corrosion resistance, makes it waterproof, and fireproof.

The company expects the main industrial use to be the protection of wood or metal equipment that gets frequent dousings from fresh or salt water. The coating is also said to stand up against most chemicals.

• *Availability: immediate.*

Rust Barrier

Another vapor wrapping to protect iron and steel parts from corrosion is set for market. The newcomer: Nox-Rust, a development of Nox-Rust Chemical Corp., 2429 S. Halsted St., Chicago 8.

The chemical in the wrapper, vaporizes slowly; this covers the surface of the ferrous parts. The vapor sheath, the company says, prevents corrosion from moisture or air. You don't need a tight seal; even if there's water inside the package, there will be no damage. Temperature changes have no effect on the protection.

The Nox-Rust Wrapper is a neutral paper; its vapor is odorless, and nontoxic. The paper can be made into envelopes to package parts like bearings, piston rings, taps, and dies.

• *Availability: deliveries start next week.*

Shiver Spotter

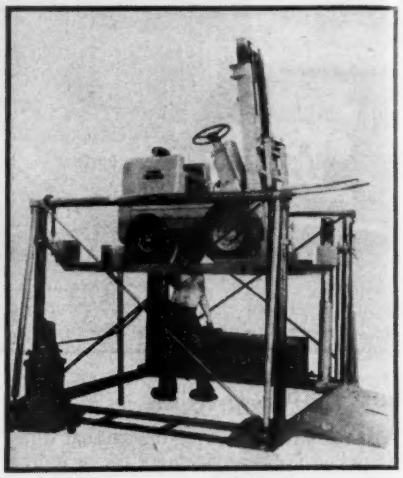
The pendulum principle used to record earthquakes will soon go to work tracking down the shivers in buildings.

Westinghouse Electric Corp. and Barry Corp., Cambridge, Mass., this week announced a portable seismograph to help engineers analyze vibrations in mills and plants. Little larger than a box camera, the Vibrograph operates mechanically, needs no electrical connections.

The instrument records machine or structural vibrations on a transparent

film. Range is from 600 cycles to 15,000 cycles per min. It will record amplitudes as low as 1/10,000 in. or as great as $\frac{1}{16}$ in. You can also measure (but not record) vibrations with a frequency as low as 120 cycles per min. Westinghouse developed the recording device; Barry makes the frame. The unit will be distributed by Barry.

• *Availability: four to six weeks.*



Fork Truck Servicer

A lift for lift trucks has been worked out by engineers at Service Caster & Truck Corp., Albion, Mich. Purpose is to cut servicing time on fork lift trucks, industrial trailers, and platform trucks. The Lubrilift is made in two capacities—6,000 lb. and 12,000 lb.

Hydraulic power raises the open platform of the lift to a height where you can lubricate and service the truck easily. Safety features: hooks that lock into the legs of the platform at any point while it's going up; pipes that drop from the platform to the floor once proper height has been reached.

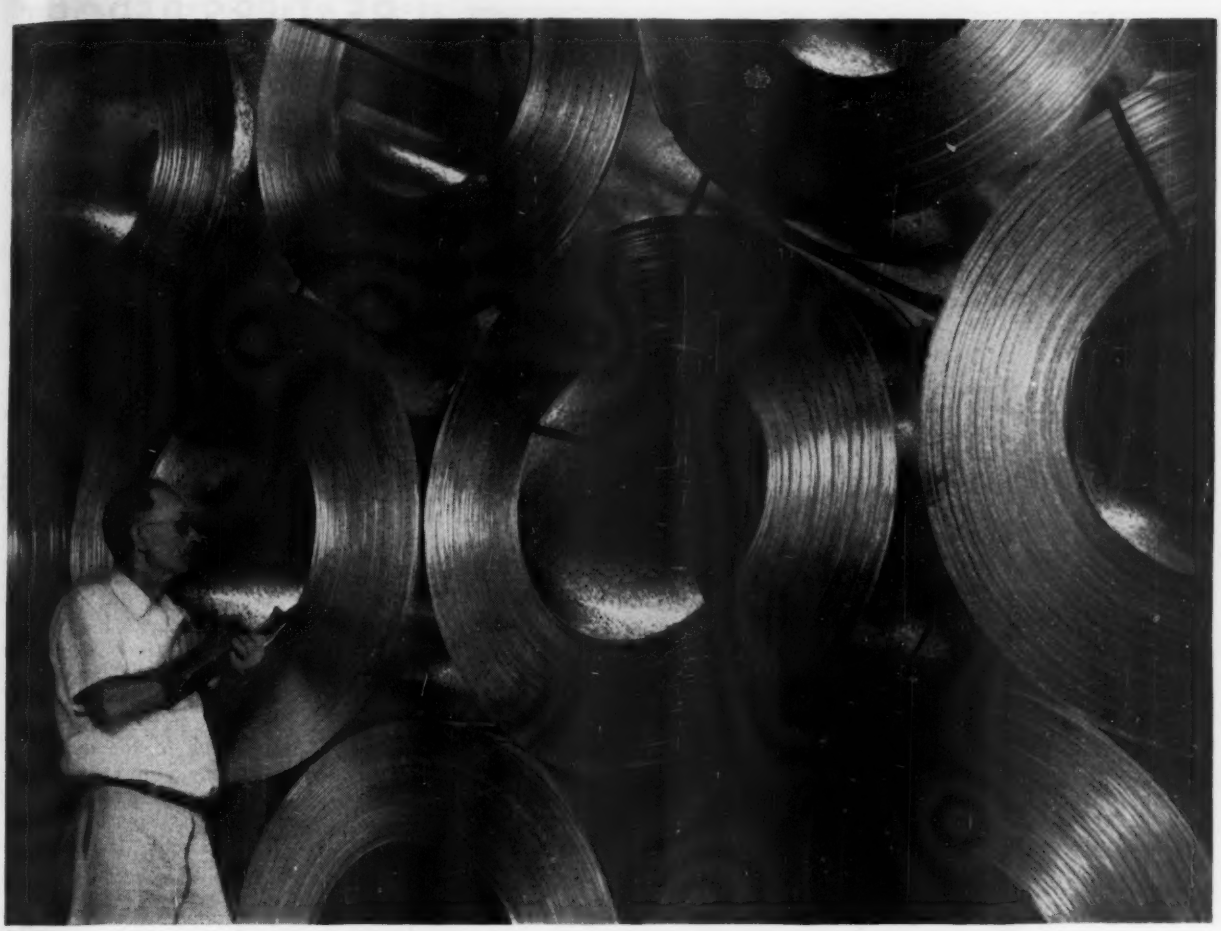
The lifter has a device to check truck wheels, a special support block for truck counterweights.

• *Availability: four weeks.*

P. S.

Sea-going water-heater uses waste heat from the boat engine to make a steady supply of warm water. The Galley Maid heat exchanger works with marine engines that operate at temperatures of 120F or above. It comes in two sizes: 5 gal. and 10 gal. The manufacturer: Wix Cooler Co., Inc., 6026 21st Ave. S. W., Seattle 6.

Nylon filter cloths to fit any rotary vacuum or pressure filter are manufactured by Filtration Engineers, Inc., 155 Oraton St., Newark 4, N. J. According to the manufacturer, they have a high resistance to acids, alkalies, and bacterial action.



This steel is cousin to a camel

The special zinc-coated steel in these huge coils never takes a drink.

Surprising as it seems, ordinary galvanized steel is always thirsty. The zinc coating forms salts which soon "drink" the oils from any paint applied to the metal. The paint, left dry and brittle, flakes and peels off before its time.

That doesn't happen with ARMCO Galvanized PAINTGRIP or ARMCO ZINCGRIP-PAINTGRIP. These special-purpose steels actually preserve paint on home freezers, furnace and water heater casings, storm windows, metal awnings, and other home and industrial equipment. The paint stays smooth and attractive years longer than on ordinary galvanized or uncoated steel. It's done by *insulating* the zinc from the paint. The Bonderizing film applied at the ARMCO mills makes it impossible for the zinc to get at the paint and absorb the vital oils.

ARMCO Galvanized PAINTGRIP and ARMCO ZINCGRIP-PAINTGRIP are just two of the many special-quality steels developed by Armco to help manufacturers build greater usefulness and longer life into their products. Buyers have learned to look for the famous ARMCO triangle trademark. They know it means the steel in a product was carefully selected for that particular purpose. Armco Steel Corporation, 504 Curtis St., Middletown, Ohio. Export: The Armco International Corporation.

ARMCO

ARMCO STEEL CORPORATION

THE FAMILIAR ARMCO TRIANGLE IDENTIFIES SPECIAL-PURPOSE STEELS THAT HELP MANUFACTURERS MAKE MORE ATTRACTIVE, MORE USEFUL, LONGER-LASTING PRODUCTS

READERS REPORT

Truman's Victory

Sirs:

I read with a great deal of interest your editorial—"A Fact That Business Men Will Have To Face" [BW—Nov. 6'48,p124]—and although I have a tremendous admiration for BUSINESS WEEK, *I am not satisfied that the analysis made here has sufficient depth.*

This last election was lost because the Republican Party did not have the proper spokesmen representing them. There is nothing to be gained by placing the blame anywhere but where it rightfully belongs—and that is on the shoulders of Brownell, Dewey, and Warren.

Instead of doing the job that any good salesman knows how to do in introducing a new product, the sales force who were chosen to do this job misjudged the market entirely, and instead of using the tried and true principles of explaining the product down to its minutest detail, they chose to cover the market with a lot of pious platitudes that meant nothing to the customer.

I was a member of the Dewey-Warren Committee here, and I was shocked and nauseated at the lack of meat in both Mr. Dewey's and Mr. Warren's speeches. As a shining example of a mass of verbiage, they were outstanding—but for selling the product, they did exactly nothing.

All the Republican Party needs is a new Sales Manager . . . somebody whose experience and background has taught him that the old adage "the more you tell, the more you sell" still holds good.

KENNETH E. GOIT
PRESIDENT
TORO MFG. CO.
MINNEAPOLIS, MINN.

• Reader Goit may be right that Dewey's campaign was not the strongest that could have been waged. Yet we cannot escape the conclusion that the election results reflected a fundamental trend in American thinking—a trend which businessmen cannot afford to ignore. Rarely has a stronger Republican candidate faced a Democrat with less glamor, more nearly repudiated by his own party, more harassed by splintering off of his left and right wings. If the Democrat won under such circumstances, it is hard to see how a different Republican campaigning style would have altered the results.

Visual Aid

Sirs:

What did the Hile-Damroth visual aid [BW—Oct.30'48,p72] do for me

on Nov. 2? · Let's look at the figures:

1948	
Graber (GOP).....	29,416—61.3%
Caldwell	18,649—38.7%
1946	
Graber (GOP).....	28,559—74.4%
Democrat	9,868—25.6%

In the Second Assembly District, I ran 654 votes ahead of President Truman, while Graber (GOP) trailed Dewey by 1,341.

In the Town of Greenburgh, where there are five enrolled Republicans for each Democrat, my vote this year was 7,011. Two years ago the Democratic candidate received 2,911.

Bill Damroth, of Hile-Damroth, tells me that a potential candidate for governor in one of the mid-western states wants to order a board, too.

Again, thanks for the friendly and keen interest in my use of a dramatic visual aid in politics.

JOHN H. CALDWELL
HARTSDALE, N. Y.

Federal Reserve Plan

Sirs:

Your analysis of the new Federal Reserve Plan, proposed by Reserve Board member, Mr. M. S. Szymczak (Oct. 23), was a masterly job of reporting. Every proposal to restrict the expansion of bank credit meets with the opposition of the commercial bankers, who want to lend more, and the short-sighted businessmen who want to borrow more. However, unless we can halt the expansion of commercial loans, our fight against inflation will be lost, and the demand for OPA—or worse—will become irresistible.

Business leaders, if they are to furnish the economic statesmanship which the times require, should support the Reserve Board's efforts to halt the expansion of bank credit. . . .

GLENN E. HOOVER
MILLS COLLEGE
OAKLAND, CALIF.

Charting Problems

Sirs:

Your "Soft Spots" graphs [BW—Oct. 2'48,p22], show 12-month moving averages of certain excise tax collections.

The way I learned it, when a moving average is used as a seasonal adjustment device, the answer is always considered to be representative of a condition existing half a cycle earlier,—in this case, six months.

It would seem in a case of this sort, where the object of the graph is largely to reveal the time of a high point, that this misphasing inherent in a moving average, becomes significant. To improve the accuracy with which these graphs indicate the timing of the per-

METROPOLITAN OAKLAND AREA CALIFORNIA

is a BW advertiser is a BW

and has been for 9 years

Metropolitan Oakland Area Committee uses Business Week to tell industry and business the advantages of locating in that part of California. The Committee has found . . . over a period of 9 years . . . that Business Week reaches a higher concentration of Management-men than any other general business or news magazine. These Management-men are the executives who make or influence important decisions of their firms . . . men who *buy*.

BUSINESS WEEK ON TOP . . . again in 1948

Most advertisers whose goods and services are sold to business and industry know that Business Week does the best selling job for them . . . at less cost. That's why, during the first 6 months of 1948 and for the past 10 years, Business Week was the leader:

1. LEADER . . .

In *page* volume of business goods and services advertising. Total: 1762 pages.

2. LEADER . . .

In *number* of business goods and services advertisers. Total: 648 advertisers.

3. LEADER . . .

In number of exclusive accounts in the business goods and services classifications. Total: 307 accounts.

This consistent, year-after-year leadership of Business Week means just one thing—

WHEREVER YOU FIND IT, YOU FIND A MANAGEMENT-MAN . . . WELL INFORMED

ertiser is a BW advertiser is a BW advertise

Industrial Development and Public Utility Advertisers in B.W.—First 6 Months 1948

Arkansas Power & Light Co.
Alameda, Calif., Chamber of Commerce
Alberta, Government of the Province of
Columbia Gas & Electric Corporation
Columbia, S. C., Industrial Service Bureau
Commonwealth Edison Company, Chicago
Connecticut Development Commission
Dallas, Texas, Chamber of Commerce
Indiana Department of Commerce & Public Relations
Iowa Development Commission
Kansas Industrial Development Commission
Kentucky Chamber of Commerce, Inc.
Massachusetts Development & Industrial Commission
Missouri Division of Resources & Development
New York State
North Carolina Department of Conservation & Development
Oakland, Calif., Metropolitan Area Committee
Ohio Power Company
Oklahoma Planning & Resources Board
Pennsylvania Commonwealth, Department of Commerce
San Jose, Calif., Chamber of Commerce
Tampa, Florida, Greater, Chamber of Commerce
United Gas Pipe Line Co.
Valdosta Chamber of Commerce
Wyoming Department of Commerce & Industry

Source: Publishers' Information Bureau

formance in their respective series, shouldn't they all be moved six months to the left on their grids? This would leave blanks from February, 1948 on, but this is all right statistically, because we cannot hope to know the average value of the twelve months centered on a month less than six months back.

RAYMOND J. BARKER
GOODALL-SANFORD, INC.
SANFORD, ME.

Sirs:

There is no doubt that the recent presidential results, as contrasted with the results predicted by the various statistical organizations, will bring forth numerous discussions concerning business statistics and their validity in general.

There is, therefore, no more appropriate time for me to protest your use of a graphic method which has irked me for many, many months. As any student of statistics knows, a fundamental rule in the use of graphic presentation of information is to use at least a zero base line whenever possible. You invariably violate this rule to the point where your graphs mean nothing.

MILTON B. GARNER
CAMDEN, N. J.

• Mr. Barker's position is entirely justified theoretically. An average should be plotted at the center of the period to which it refers—in this case six and a half months back on the twelve month cycle. Occasionally, however, it becomes necessary for us to sacrifice technical correctness in order to achieve greater clarity of presentation. Had we ended our plotting in February, most of our readers would have wondered what the movement had been between February and August or September.

In a sense, too, there is a certain justification for our plotting these curves as we did. In series as highly seasonal as these were, each month can only be appraised as "good" or "bad" in relation to a corresponding month of the last cycle. Thus, in terms only of the movement of the graph, the turning point does actually come when volume in one month is lower than volume in its corresponding month of the previous cycle.

Mr. Garner's remarks on BUSINESS WEEK's methods of graphic presentation catch us on a point where we are vulnerable to a certain extent. We have been taken to task before—and we will be again, because we feel we have more to lose than to gain by sticking slavishly to the zero line.

As editors rather than statisticians, we feel that many of our charts appear only to show trends; they are illustrations rather than statistical tools-of-trade. We commit what we feel are minor sins of statistics to achieve readability.

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BUSINESS WEEK REPORTS TO EXECUTIVES ON—

What's Coming in Steel

STEEL MAKING IN AMERICA is on the verge of passing through another revolution. It is not an overnight upset of production methods; it is a slow revolution in the steel making processes.

Changes now being explored, tested, and put into practice by the steel industry are not sensational enough to capture the fancy of the general public. But to American industry these developments in steel making are packed with importance.

These are not changes which will increase the capacity of the steel industry a hundred fold nor will they cut the price of steel into a fraction of the current quotations.

But the new methods of making steel that are being tried out appear to be more efficient than some methods generally being used now. They perhaps will also prove to be less expensive ways of making steel. They definitely will increase steel output. And that, of course, should bolster the U.S. economy, for steel is the industrial backbone of America.

Wide-scale acceptance of new steel production methods will come slowly. Fundamental changes in an industry as big as steel and with its heavy capital investment cannot come any other way. It is not just a question of changing jigs and dies and rearranging the assembly line as an automobile plant does when it shifts from one model to another. It is a question of obsoleting many millions of dollars worth of equipment. It is a question of spending many new millions for new equipment. It is a question of finding the funds to finance such a gigantic undertaking. Such things are done slowly.

But they are being done today. A start has already been made. Experimenting with new methods is no two-bit operation in itself. For example, nearly a half-dozen companies in the industry each have spent as much as a million dollars already in preliminary work done with one of the new processes.

What are the new processes? How expensive will these changes be? How many more tons of steel will be produced by the new processes? The answers are sketchy. But they do show the trend.

The steel industry is exploring many ways of increasing its efficiency and its production. But the three outstanding methods are: (1) using oxygen; (2) using more air at higher pressure; and (3) continuous casting. Those terms don't mean much to people outside of the steel industry. In order to understand them better, it is necessary first to know what the current methods are for making steel and the history in back of them.

A Century of Progress

The history of steel making in America covers a little more than 100 years. That is true even though steel had been made here many years before that. A hundred years ago, in 1847, the U.S. was producing at an annual rate of 6,000 tons of steel. Its growth since then has been much more phenomenal in the U.S. than in the rest of the world, for the U.S. steel industry increased its annual production by 1,300 times while the rest of the world increased its steel output about 175 times.

By 1915 the U. S. was producing almost half the steel in the world. This has increased to a point where this nation produces 60% of the world production.

Most of the U.S. output—about 90%—comes from open-hearth furnaces today. The remainder is made in Bessemer and electric furnaces.

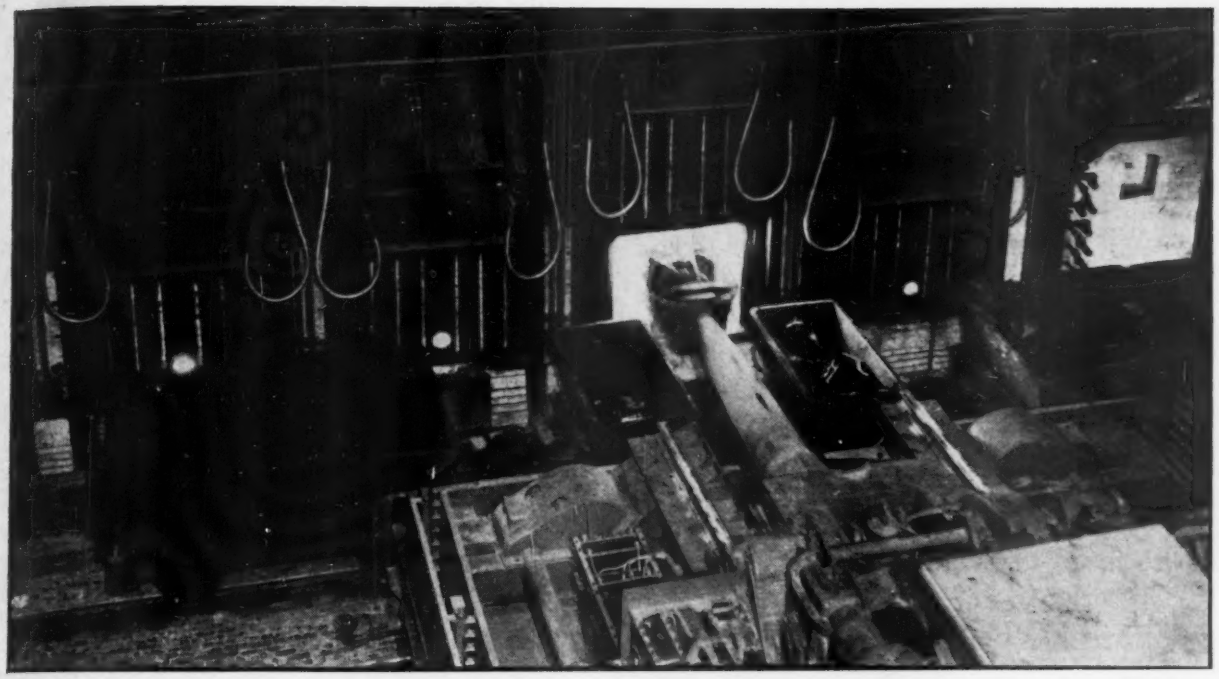
Total production of steel for ingots and castings was in excess of 84-million net tons in 1947. This output came from furnaces with total capacity in excess of 91-million tons. Ingot production this year is running at an annual rate of about 88-million tons out of an annual capacity a a little better than 94-million tons.

Both capacity and production have been growing considerably since 1938, the year before World War II began. Capacity in 1938 was roughly 80-million tons while production was 31-million tons. Production zoomed rapidly as defense demands, then war demands, piled higher and higher. As soon as government planners saw that production would bump against the capacity ceiling and still all demands would not be satisfied, cries were raised for steel expansion. The steel industry first stalled, finally caved in. Steel expanded as the war rolled on until capacity finally got up to 95-million tons. That included every piece of equipment that would run, regardless of age or condition.

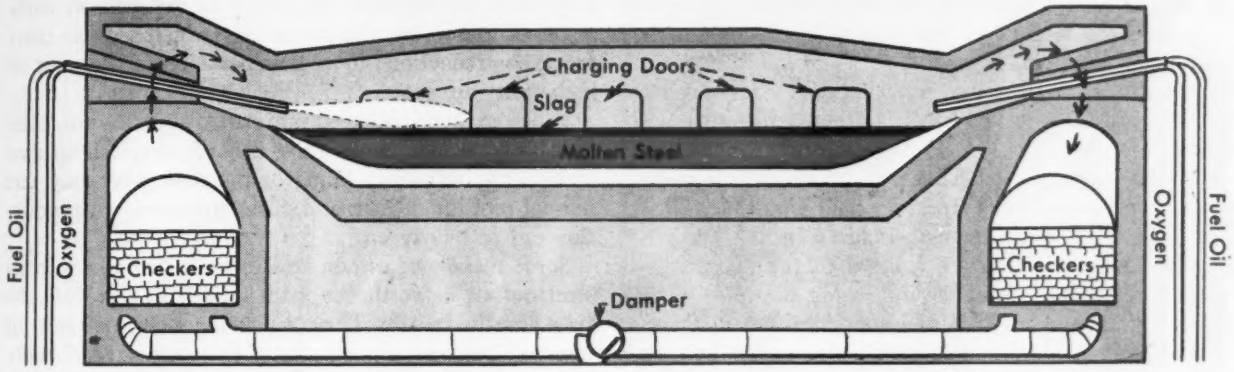
Past history indicated to the steel masters that peacetime demand wouldn't match the war's appetite for steel. So, obsolete equipment was retired within a year after World War II ended. Total capacity was reduced by 4-million tons. Even more equipment might have been junked except for the fact that demand held high and strikes interfered with production.

So, steel companies again switched plans. They saw they would have to race like mad if they were ever going to catch up. Fires were relighted in old furnaces. Rolling mills ticketed for dismantling were started up. And new facilities were ordered. First, postwar expansion was limited largely to new finishing capacity. Later, plans were adopted to step up ingot output, too. Now, three years after V-J Day, steel demand still exceeds supply. As a result, the steel furnaces are operating at near-capacity levels most of the time except for periods when labor, materials, or other problems interfere.

The steel industry will have a total potential of better than 95-million tons next year and probably 96-million tons in 1950. But even that may not be enough if de-



CHARGING MACHINE dumps scrap from a charging box into the open hearth. Next it will pick up loaded box. Empties move left



OPEN HEARTH FURNACE refines pig iron into steel. Here an oxygenated flame from oil-fired burner at left heats the molten steel bath. Impurities rise into slag. Air coming in at damper below is heated in the "checkers," enters furnace (arrows), gets more heat from bath and makes right-hand checkers red hot. Cycle is reversed after 15 min.; right-hand checkers heat incoming air

mands for steel are increased by orders coming from military sources to be stacked on top of civilian needs.

That is why methods which will produce more steel with present equipment offer much help and invite interest from steel producers and consumers alike. Present day furnaces of course are not equipped generally to produce steel according to the new processes. But the changes and additions to existing capacity definitely will be much smaller and less expensive than would be necessary to add new basic equipment from the ground up.

OXYGEN FOR STEEL

SINCE THE WAR, a magic word has been bobbing up in conversations wherever steel men gather. That magic word is oxygen.

The industry has used oxygen for years for such purposes as removing surface defects from blooms and billets, and cutting them to required sizes. This oxygen is about 99.5% pure, and fairly expensive—from $2 to $5 per 1,000 cu. ft., if used in large amounts.

But the steel industry is talking today of cheap, low-purity oxygen—ranging from about 90% to 95% pure—used at the rate of many tons daily. (A ton of oxygen is about 24,000 cu. ft.) Cost estimates for this "tonnage" oxygen range from $3.50 to $10 a ton, depending on the size of the plant producing it.

Several ways could be found for tonnage oxygen to speed up the making of steel. Most of these methods are already being applied with high-purity oxygen. But except for low-carbon steels, work with high-purity oxygen is pretty much on an experimental basis. It would cost too much in regular practice. Cheap oxygen by the ton could change that picture.

The first commercial plant for making tonnage oxygen started only a few weeks ago. This is a pilot plant

with a daily production of 150 tons, built for Bethlehem Steel Co. at Johnstown, Pa., by Air Reduction Co. and Koppers Co., Inc. The completion of this plant is a landmark in the development of oxygen for use in the steel making industry.

The possibilities of oxygen have been appreciated by the industry since the early 20's. But the expense of practical research delayed investigation. At the close of World War II there was a surge of interest in tonnage oxygen, not only in steel, but in the oil, gas, and chemical industries. Technical progress had made it possible to produce cheaper oxygen. Another reason, as far as the steel industry was concerned, was the growing pressure on it to expand productive capacity. The industry was unwilling to increase capacity much. Reason: Historically, demand for steel has fallen further during depressions and has risen higher during boom times than demand for the products of most other industries.

Its Use in Open Hearths

So it was big news when, in 1946, Air Reduction announced successful large-scale experiments with oxygen in melting down scrap in an open hearth furnace (BW—Sep.7'46,p16). Even then, other oxygen producers and steel companies were also at work.

Enough has been done since then with oxygen—in its high-purity form—in the open-hearth furnace to indicate the possibilities of tonnage oxygen there. Before going into details, let's see how steel is produced in an open hearth.

Heated by gas, or oil flames, the open hearth melts down an initial charge of steel scrap and limestone. Then hot pig iron is added, along with iron oxide. The impurities in the pig iron are reduced to the proper percentages by the action of the iron oxide and lime. They separate from the pig iron and combine with the limestone to form slag. When the hot metal has reached the composition desired, the furnace is "tapped." Molten steel and slag run off separately.

It's somewhat like a housewife cooking stew. She puts in the ingredients she wants, stirs up the mixture as it bubbles on the stove, tasting it occasionally and putting in salt or spices as needed. Similarly, the furnace operator tests the composition of his metal while it is in the furnace, and adds other materials, so that when tapped it will have the desired composition.

The tendency today is for open-hearth furnaces to be heated by fuel oil. The flame is applied through burners at each end of the furnace (sketch). Oxygen can be added to the flame to increase its heat and melt down scrap and limestone faster. This is called "flame enrichment." Flame enrichment requires tonnage oxygen if it is to be used in standard practice. It may eat up more than 600 cu. ft. per ton of steel produced. That runs into important money if high-purity oxygen is used.

Further, scrap has to be charged into the furnace fast enough to keep up with the quicker melting rate. Otherwise, the value of the higher temperature is lost. This couldn't be done in most shops, if all furnaces were to be operated on oxygen, without extensive changes. A possible solution: Melt the scrap with oxygen in a separate furnace before charging it into the open hearth.

Oxygen may not be the best method of flame enrichment, anyway. Tests by Carnegie-Illinois Steel Corp. people indicate—to them, at least—that compressed air, which is cheaper, is nearly as efficient as oxygen. And compressed air is cheaper than low-purity oxygen.

During the refining period of the heat, there are several uses for tonnage oxygen. Use of high-purity oxygen has been found to be practical here under some conditions, since smaller amounts are needed. But, of course, tonnage oxygen would be more economical, if it were being used by the same plant in the blast furnace.

By using a lance or jet device, oxygen can be injected through the furnace doors directly into the hot metal bath. That can speed reduction of its carbon content by two to five times the normal rate. Where very low-carbon steels are concerned, use of oxygen for this purpose is already standard practice. Such steels used to take one to five hours longer to finish than medium-carbon steels. A small amount of oxygen can step up production 15% to 30%, and fuel savings of 5% to 10% are common.

Allegheny Ludlum Steel Corp., which seems to have been the first to use oxygen for carbon reduction on a large scale, reports that the saving in fuel and in such materials as iron ore and iron oxide (which are also used for carbon reduction) more than make up for the cost of high-purity oxygen.

When oxygen is injected into baths whose carbon content is over 0.30%, molten slag is likely to splash up and damage the refractory lining of the roof. This may cut normal roof life in half, and offset any increased production caused by oxygen.

Some makers of carbon steel believe that the gain in steel output is worth the extra refractory cost and the time lost in repairs. They are trying new methods of meeting this problem. Among them: higher roofs, double roofs, injecting oxygen at lower pressure, injection in several places at once.

But many steel men think compressed air is more efficient for reducing carbon, when working with higher carbon ranges.

Oxygen in small amounts can be a very useful tool for the open-hearth operator. It can adjust temperature quickly, speed up various phases of the heat. In a typical open-hearth shop, there may be a dozen or more furnaces. These furnaces should finish their heats one at a time, not in bunches, so molten steel may move smoothly to the rolling mill. But heats sometimes do bunch up. One furnace may work slower than expected, another faster. When this happens, oxygen can speed up one furnace, and get the cycle running smoothly again.

For the same reason, speeding up production of the open-hearth shop may not fit into a particular plant's situation. It doesn't do any good to increase production, if: (1) Additional pig iron, scrap, and other materials aren't available to feed the open hearths; (2) charging can't be speeded up; (3) tapping and teeming (pouring the molten steel out of the furnace and into ingot molds)

can't be speeded up; and (4) rolling mills and the other later stages of the steel plant can't take the increased output in their stride.

It all depends on the individual steel plant. In many cases, use of oxygen may eventually permit the shutting down of older, less efficient open hearths, while maintaining the same output. That will cut costs.

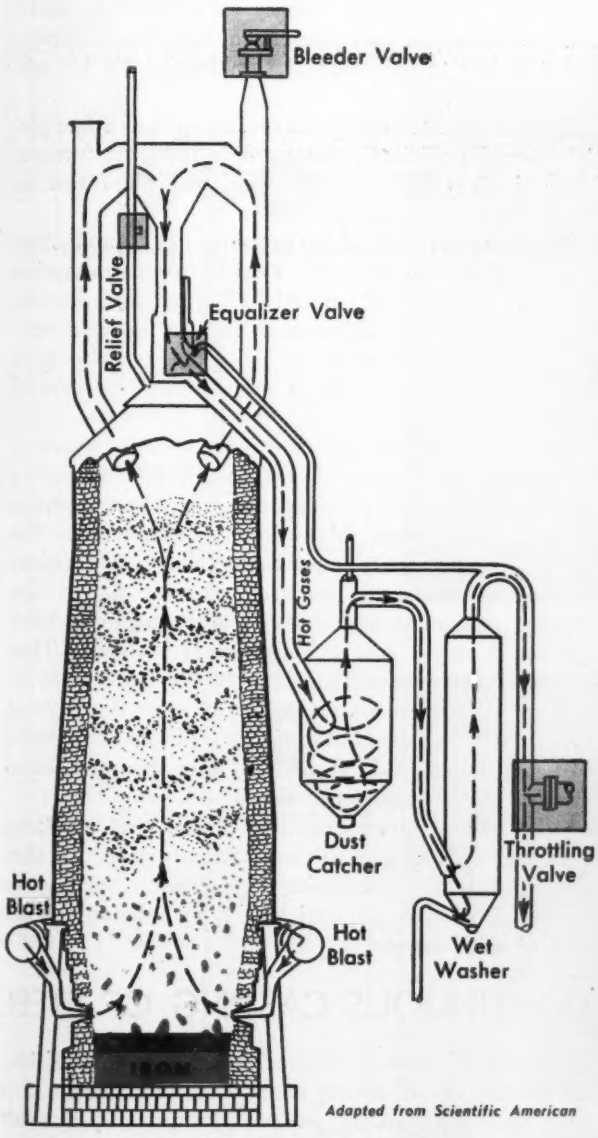
But oxygen is not a miraculously inexpensive way to increase production of steel in open hearths. Considerable revamping of existing shops will be necessary to get the most out of it.

In the electric furnace, where stainless and alloy steels are made, oxygen has proved itself. High-purity oxygen is put into the furnace to reduce carbon content. It is increasing production and improving quality of the steel, particularly in the case of stainless.

Oxygen also may cause a revival of the Bessemer converter. Its use has been declining in the U. S. for many years. Usually, the Bessemer can't handle much scrap and is charged mainly with molten pig iron. Air is forced through the charge to burn out impurities in the metal quickly. Oxygen has made it possible to increase the scrap charge. It has improved the quality of Bessemer steel by lowering the nitrogen content.

Its Use in Blast Furnaces

How would tonnage oxygen be used in the blast furnace? Let's see how a blast furnace works. Iron ore as it comes out of the ground is a combination of iron, oxygen, and dirt (called "gangue"). The blast furnace heats this ore in the presence of carbon. The carbon com-



BLAST FURNACE shown at left has been converted to top pressure by four valves (shown in gray squares). Pre-heated air is blown in at bottom. The carbon gas goes up through the ore, coke, and limestone—which have been charged into furnace from top. The hot gas leaves the furnace, to be cleaned in dust catcher and wet washer. At right, a big Republic Steel furnace at Warren, Ohio

bines with the oxygen, takes it and the gangue out of the ore. Pig iron is left.

Ore, coke, and limestone are charged into the blast furnace from the top. Pre-heated air is blown in from the bottom. This heated air burns the coke, creating very high temperatures. The charge gradually descends, and in the intense heat becomes pig iron, slag, and hot gases. The gases go off at the top, and the pig iron and slag are tapped out at the bottom.

If the pre-heated air is enriched with oxygen, this whole process can be speeded up, perhaps by 20%. It takes an enormous amount of oxygen to enrich the blast from the 21% content of air to, say, 26%. Four tons of air are needed to produce a ton of pig iron. To enrich these four tons to 26% takes more than a fifth of a ton of low-purity oxygen.

The new Bethlehem tonnage plant, with a daily output of 150 tons, can supply the needs of one medium-sized blast furnace. It has been estimated that it would take 30,000 tons of oxygen a day to operate all U.S. blast furnaces at an oxygen content of 26%. An additional 7,000 tons would be needed for all uses in U.S. open hearths.

Only two other tonnage plants are known to be under actual construction for the steel industry, though several others are being planned. The capacity of one plant—being built by Air Products, Inc., for Weirton Steel Co. at Weirton, W. Va.—will be 400 tons daily. It will probably be used for blast furnace experiments, as well as work in the open hearth and Bessemer converter.

The other plant is being built at Steubenville, Ohio, by Linde Air Products Co., a subsidiary of Union Carbide & Carbon Corp., to supply Wheeling Steel Corp. It will produce about 135 tons a day, mostly for the open hearth.

The experience of these plants will go a long way toward answering these questions: (1) How cheaply can tonnage oxygen be produced? (2) How much will it increase production, and cut fuel costs?

Until the experience of the Bethlehem plant is published, very little can be said about blast enrichment with oxygen. However, there is another new development in blast-furnace operation which may eventually be combined with the use of oxygen.

MORE AIR FOR STEEL

REMEMBER THAT PRE-HEATED AIR is blown into the bottom of the blast furnace. If instead of increasing the oxygen content of this air blast, the air is blown into the furnace faster, the same result is achieved—more production. The faster that air can be blown in, the shorter time it will take to reduce iron ore to pig iron.

Steel engineers have known this a long time. But there were practical difficulties: (1) If the air were blown in too fast, many fine particles of ore would be blown out of the top of the furnace along with the carbon gases. (2) An increase in blowing pressure meant that the carbon gases didn't react with the ore as fully as they should.

But about two years ago Republic Steel Corp. and the industrial engineering firm of Arthur D. Little, Inc., began successful operation of two blast furnaces under top pressure. They made structural changes in these furnaces to throttle down the flow of gas escaping from the top of the furnace. In other words, they increased "top pressure." At the same time, they increased the "wind rate" of air blown into the furnace.

What happened was that the gases inside the furnace moved upward more slowly, and were distributed more evenly through the ore and coke. So even less ore dust than before was blown out at the top. And the carbon gas reacted longer and more evenly with the ore. This meant that coke consumption could be reduced.

Top pressure gives the furnace operator flexibility. By varying the amount of top pressure and the velocity of air blown in, he can control over a wide range the speed at which gases will go through the furnace. This means he can adjust his furnace for different kinds of ore. He can adjust iron production, coke consumption, and flue dust to the cheapest combination for his particular furnace.

This means that lower-grade ore, composed of fine particles, can be efficiently processed in the blast furnace. More of this sort of ore will be smelted in the future, as the better Mesabi ores run out.

Some proven results of top pressure: (1) A production increase of 11% to 20%. (2) A cut in coke consumption of 13%. (3) Flue dust reduced 30%. And, since increasing pressure inside the furnace did not increase temperatures there, the refractory lining was not damaged. All this has meant savings of more than $1 per ton of pig iron.

How much does it cost to convert a blast furnace to the new method? About $70,000 to $150,000, depending on the furnace, and provided adequate blowing equipment is already there. Many furnaces already have this extra blowing capacity, since extra pressure is necessary at times. Arthur Little engineers estimate that, if new blowing equipment and steam installations are needed, conversion might cost as much as $1.3-million. They think this could be written off in two or three years.

Republic is now converting several other furnaces to top pressure. Its current program calls for conversion of seven out of its 21 furnaces. Other steel companies are watching its experience closely.

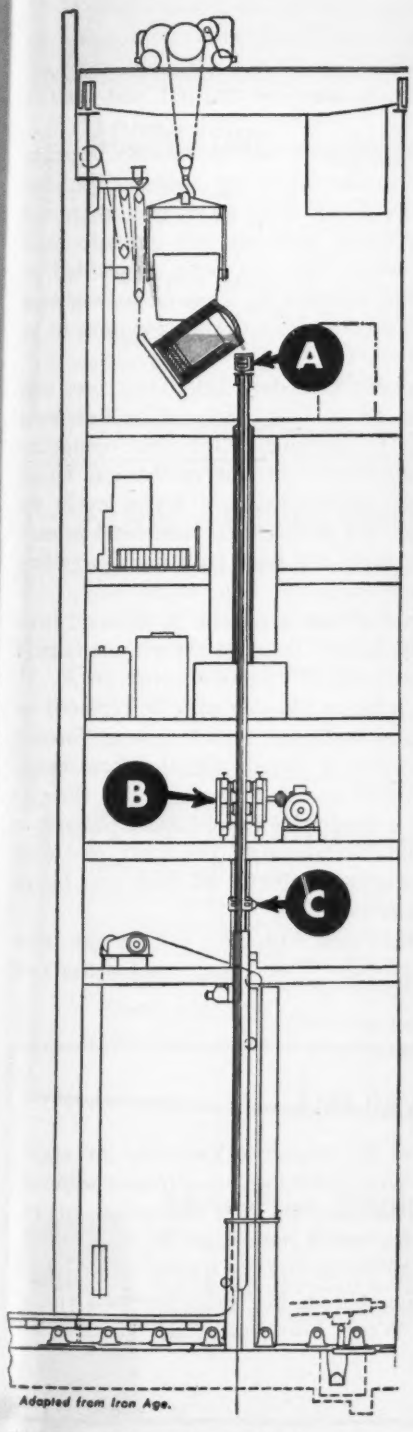
Some blast furnace engineers believe that enriching the blast with oxygen will not save any coke. So they propose that the coke-saving high pressure method be combined with oxygen enrichment, in order to cut the cost of using oxygen.

CONTINUOUS CASTING OF STEEL

THERE HAS BEEN LITTLE CHANGE since the dawn of history in the process of casting metal into forms as the first step toward a finished product. Primitive man made his mold, poured in metal, then took out the casting to be reheated and hammered into shape. Steel plants today follow the same basic principle.

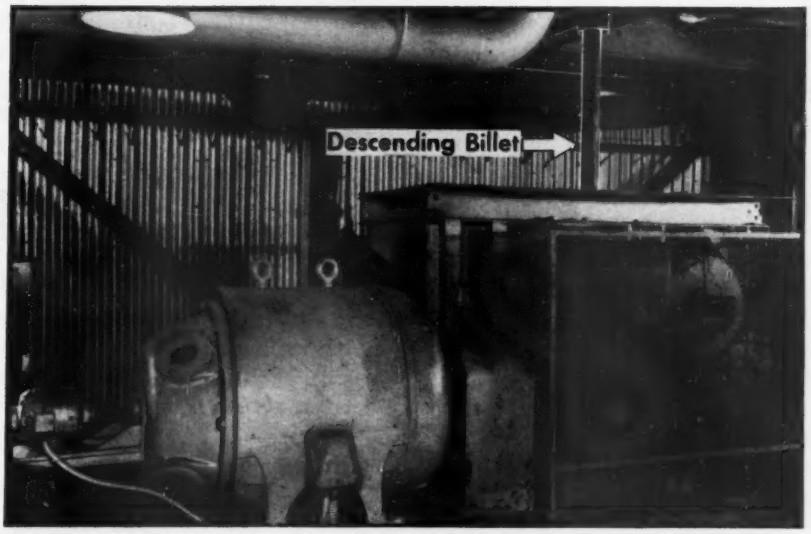
But for the last century metallurgists have been

CONTINUOUS CASTING TOWER turns out about 12 tons of billets an hour. Molten steel is carried to top in a ladle, held in reheating furnace. From there it is poured into a mold of thin brass, cooled by 500 gal. of water per minute. The mold forms fluid steel into a continuous, oval-shaped ribbon. Rushing water allows the mold to stand the terrific heat, chills steel to hardness. This rapidly solidifying ribbon goes down the tower, its speed regulated by pinch rolls, until it is cut into lengths. Then it is lowered to the ground

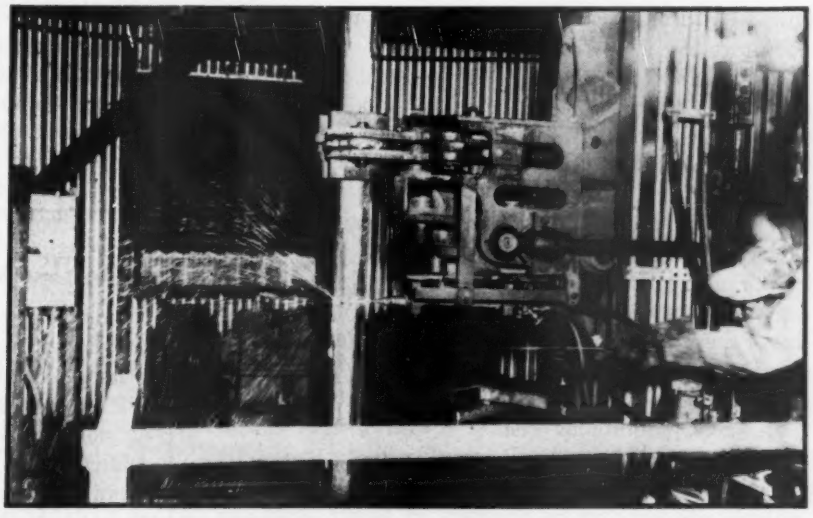


Adapted from Iron Age.

(A) MOLTEN STEEL is poured into mold through tundish, which strains out the slag



(B) PINCH ROLLS (within the machine at right) control speed of the descending steel



(C) ACETYLENE TORCH cuts billet into desired length. This is adjusted by movable cradle at bottom of tower. When lower end of billet hits this, the torch goes into action

dreaming of continuous steel casting—of putting hot metal into a cooled mold and getting a steel shape out of the other end. Sir Henry Bessemer, who has been called the father of steel making, experimented with the idea but without success.

About 10 years ago, after decades of effort, continuous casting did become practical for nonferrous metals. The process requires a relatively low capital investment; only a few men are needed to run each unit. The product of nonferrous continuous casting, too, is said to be better than that cast by older methods.

But most steel men did not seriously consider that continuous steel casting was practical. There were big obstacles: (1) Steel was much cheaper than nonferrous metals. (2) Steel had to be cast at higher temperatures than nonferrous metals, and it was very hard to find a mold that would keep from melting. (3) Steel's sensitive characteristics make it tricky to handle.

Nevertheless, about six years ago Republic Steel Corp. and Babcock & Wilcox Tube Co. began experimental work in continuous casting. In 1946 experimental work settled down at B. & W.'s plant at Beaver Falls, Pa. Two years later, the two companies announced they had succeeded in casting steel continuously (BW—Aug.28 '48,p21).

Continuous casting is of dollars-and-cents interest because it cuts out several very costly steps in the steel making process. At present, molten steel tapped from the open-hearth furnace, electric furnace, or Bessemer converter is poured into ingot molds. After the metal has solidified, the molds are stripped off, and the ingots are shipped hot to the blooming mill. There they must be held in pit furnaces, called "soaking pits," to be reheated until the proper rolling temperature exists throughout the whole mass. Then the blooming mill rolls the ingot into blooms or billets—chunks of steel in sizes easier to handle than the big ingots.

This takes lots of massive equipment, lots of manpower. But the casting tower makes all these steps unnecessary. It saves time and money. It opens up the possibility of small-scale, decentralized production by nonintegrated mills.

Republic and B. & W. say that the steel produced by continuous casting is better than that produced by the conventional method. Surface of the billet is said to be freer of imperfections than ingots generally are. Also, the interior of the billet is said to be freer from slag.

A mold producing billets with a cross-section of about 27 sq. in. has been used so far. Billets can be produced by the pilot unit at the rate of 12 tons an hour. Future experiments will discover whether there are limits on the size of shapes that can be cast. So far, it seems that ovals of special proportions are most practical. These can easily be rolled in a mill into flats or rounds.

However, continuous casting is still in the experimental stage. More development will be necessary before full-scale units can be set up. For one thing, controls will have to be designed so bigger units can be operated to best advantage. Continuous casting may still be in swaddling clothes when the steel industry is using oxygen, for example, in practically all of its furnaces.

A SLOW REVOLUTION

THE THREE BIG REVOLUTIONARY STEPS are not all of the new developments in steel making either. Much work has been done, for example, on: (1) methods of utilizing taconite low-grade ores; (2) improved coal washing to remove sulphur and ash from coal used in steel furnaces; (3) better materials-handling equipment for furnace repairs; and (4) new types of refractories. Everywhere along the steel production line from ore and coal mine to the finishing mills, there is change. New methods, new processes are being tried out and put into practice when proven.

Not since the 20's when the steel companies began to shift to high-speed continuous rolling mills has the steel industry been in the throes of so much revolution and change. And even today there are still old-type hand mills in operation which have not been supplanted by the continuous rolling equipment. That shows how long it takes for a big change to get universal adoption in an industry like steel.

A lot of work remains to be done before the three new intriguing processes for making steel can be free from flaws. Research has to continue. Pilot plant operations will be followed closely to get out mechanical faults. Extensive plant rearrangements have to be made for this new equipment. All of that takes time—and money.

But slowly and surely the steel revolution is getting under way.

The final outcome, of course, may be far different from anything envisioned today. Tonnage oxygen plants built now may look as antique as Victorian houses in 20, 30, or 50 years. Top pressure blowing may be replaced by an even newer idea by that time. So a long range forecast is not likely to be safe or sound. On the short range, what does all this add up to? Something like this:

(1) A proof that considerable technological progress in steel is being made. Metallurgists, physicists, and engineers are doing a bigger and better job than ever before for the steel industry.

(2) A promise that steel customers will get the benefit of these developments. They stand to get better steel and more of it.

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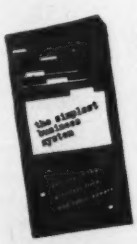

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OZALID A Division of General Aniline & Film Corporation, Johnson City, New York Dept. 200

Gentlemen: Please send free copy of "The Simplest Business System"... fully explaining the savings realized by using translucent papers and new Ozalid Streamliner.

Name_____ Position_____

Company_____

Address_____

Ozalid in Canada—Hughes Owens Co., Ltd., Montreal

MARKETING

SLEEK AND LANDSCAPED, the Thompson lumberyard on Minneapolis' busy Lake Street shows how lumbermen are . . .

Dressing Up the Old Yard for a New Market

OLD STYLE: You can buy paint and hardware here, but to look at it, you would never guess it. This yard, in an industrial area, is one that Thompson isn't converting. Reason: Industrial customers will buy without the extra coddling it takes to lure women into the store

NEW STYLE: This trim, inviting room, in the Lake Street yard, could be any up-to-date retail business office. The old cluttered look has gone, and a woman need not be afraid to step inside. Male customers may like it better, too

Glamorous facades, stocks of home appliances, and planning advice give today's lumberyard a broader sales appeal.

A lumberyard, as any old-timer will tell you, is a place to sit on a nail keg and sniff the acrid smell of wood running through a circular saw. Recently, however, there have been some changes made. The owners have an eye to the day when selling may slow down.

Last week those changes showed up full force. The lumber industry was celebrating not National Lumber Week, but its own National Home Appliance Week.

• **Ladies Invited**—For one thing, the old "for men only" atmosphere is gone. Nowadays Mrs. Consumer is likely as not to be shopping in a lumberyard for a pressure cooker while Mr. C. picks up a two-by-four or a slab of roofing.

The lumbermen welcome the appearance of the little woman in the yard. In fact, they're going out of their way to be nice to her—and to make extra sales. Building Supply News made a survey recently of 1,600 lumber and building supply dealers. It found that some 40% of the dealers now (1) sell household appliances to builder or consumer purchasers; (2) supply kitchen layout plans to homemakers; (3) actively go out for home-modernization business.

• **Case Study** — Take the Thompson Lumber Co., Minneapolis, for example. Thompson operates five yards in Minneapolis. Three of them have had ex-

tensive face-lifting jobs to lure the distaff trade. The other two, in industrial areas, won't be converted.

Here's what Thompson did. First, it put a new facade on its buildings and made them look like retail stores.

• **Appliances**—Second, Thompson added a complete appliance line. You can now buy a refrigerator, stove, or a dishwasher in the store, as well as radios, toasters, and clocks. Then the company added a kitchen-planning department. In it, experts show housewives how to lay out their kitchens to the best advantage. And Thompson, of course, is not averse to selling the equipment.

You can still buy such standard lumberyard merchandise as paints and hardware at Thompson's. But it gets a better break in the new store. Yesterday's lumberyard only half tried to market these products. Now the hardware is on display, and you can get charts and advice on colors for your home.

• **One Bill**—One major attraction that Thompson features is a "one-bill-for-the-works" plan. If you want, the lumber company will line up the craftsmen to install a new kitchen or modernize an old one; it will supply planning help—and the appliances. When the job is done, you pay only one bill. The simplicity of the plan, says Thompson, appeals to many feminine customers.

KITCHEN UNIT has a strong appeal for women customers. Thompson has developed extensive home-planning centers, where it sells the idea, and the appliances

DISPLAY'S THE THING in this colorful corner of Thompson's busy lumber yard. Here paints and hardware, carefully exhibited, get a chance to sell themselves

A New Convert to Branches?

Rich's, big Atlanta retailer, cracks its traditional single-store system, sets up "branch"—for mail-order business only. Advantages: More sales at low cost, a foot in mail-order-house door.

Department-store executives are of two minds on whether the march to the suburbs is a good thing or not.

Some stores are sure that it's the answer to problems of traffic, parking, and growing population in outlying districts; they are busily setting up branches outside the downtown areas.

Others still think that the giant store in the heart of the city brings in the biggest merchandising profits for the company.

• **Divided Paths**—Rich's, Inc., in Atlanta, has stuck with the main-store school until now. Last spring the company spent $7-million to add 350,000 sq. ft. to its main store (BW—Apr.24 '48,p88). Shortly before that, Rich's had increased its floor space by 400,000 sq. ft.

A Rich's competitor, Davison-Paxon (owned by R. H. Macy & Co.) has gone in for the branch system. It has set up four branches—in Augusta, Columbus, and Macon, Ga., and in Columbia, S. C.

• **New Tack**—Now Rich's has stuck a tentative finger in the branch-store pie. Last week, the company opened an "order branch" in Rome, Ga. The move doesn't actually put Rich's into the branch-store field, because its new store carries only catalogs and some merchandise samples. But it does make it a lot easier for people in and about Rome to buy from Rich's.

Observers in the retail trade think they see a couple of reasons for Rich's new venture:

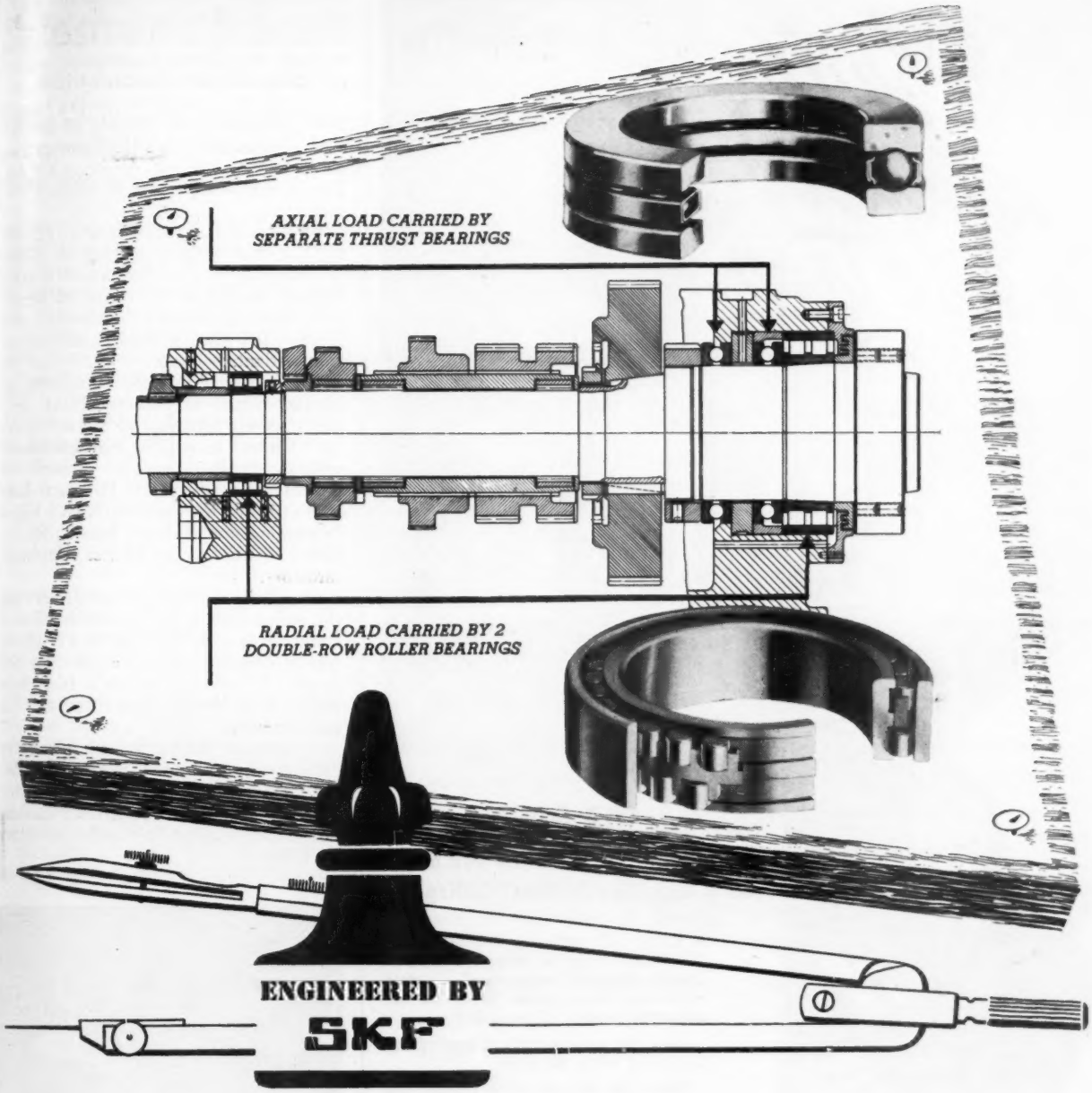
(1) The company wants to expand its out-of-town volume without paying out all it would take to build a complete store today;

(2) Rich's may hope to draw some sales away from those two big mail-order houses—Sears, Roebuck and Montgomery Ward—both of which have stores in Rome.

In Rich's Rome store, customers can pick from four sets of five-volume catalogs. These carry photographs of merchandise from every department in the Atlanta store. Fabric swatches help them choose their ready-to-wear clothing or upholstery. They can also get ad-

Ties That Bind a Salesman to His Product

Wearing of "sincere" ties is no longer restricted to the advertising fraternity. You, too, can now wear a hand-painted silk cravat embellished with the sign of your trade, business, or profession. Marie of Detroit, art studio, designs the ties; manufacturers give them to their salesmen, customers, and friends. The designs above, for a group of Detroit companies, include neckwear for (left to right): Dearborn Motors Corp., tractor distributor for Ford Motor Co.; Detroit Diesel Engine Div. of General Motors Corp.; Michigan Tool Co.; Great Lakes Steel Corp.; American Metal Products Co.



ENGINEERED BY SKF

Up to 500% greater spindle rigidity...assured by these SKF heavy-duty machine-tool bearings...permits faster, deeper and smoother cutting. No bearing adjustment required for variations of speed, feed or depth of cut. Better work...lower production costs.

7022

SKF **BALL AND ROLLER BEARINGS**

THE RIGHT BEARING IN THE RIGHT PLACE

SKF INDUSTRIES, INC., PHILADELPHIA

vice on interior decorating; and the store offers a special service in this field for brides.

• **Quick and Cheap**—Customers' orders are sent to the Atlanta store by teletype. The next day a contract trucker brings their purchases from Atlanta to Rome. And in Rome, a Rich's truck carries the goods to the customer. All items are delivered within 48 hours of placing the order.

Rich's new order store is small (2,000 sq. ft.); four employees man it. Thus it's not costly to run. The branch is strategically located in the center of Rome—for the convenience of customers, and to show the window displays shipped in from Atlanta.

Rich's opened its store with plenty of hoopla, aimed at making Rome residents acutely conscious of the new service. Personal invitations and newspaper announcements brought plenty of crowds on opening day. For each lady who attended the opening, Rich's had a free orchid—and a sticker bearing Rich's Rome number to put on her telephone directory.

• **On Trial**—Company executives say the Rome store is an experiment. But it could become the first link in a chain of similar branch order stores all over the South. It will take a year's trial, says Rich's, to determine how successful the experiment is.

At present Rich's has no plans for fully developed branch stores. But this trial move has other storemen wondering whether Rich's might be nailing down one solution to the branch-store question.

Botany's Answer . . .

To the problem of how to make the best impression on a customer is this new fabrics showroom it unveiled in New York City last week. Designs for Business, Inc., and Louis Hatkoff got together on the modern decor.

Salesman's School

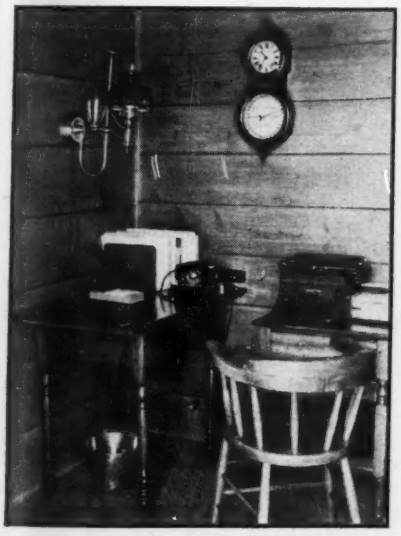
With buyer's market edging back, C.C.N.Y. has two courses going full blast. Teaching is done through example.

Sales training wasn't very important during the war years. Anyone who could write well enough to fill out an order blank made a first-rate salesman. But the buyer's market is back in some lines. That means that selling is once again more than order-taking.

• **Training Program**—Two years ago City College of New York decided to try its hand at sales training. Last week, the Professional Sales Club, which represents 1,200 C.C.N.Y. sales alumni, met to elect officers and survey the progress the training courses have made.

They found the "Intensive Business Training Program" running full blast. The curriculum now consists of two courses. One, the standard course, has 225 enrollees. The other, a fancier course for salesmen farther up the ladder, has only 30 carefully selected students.

To get into course No. 1, the enrollee only has to be interested in a selling career and have the necessary tuition—$368 for 450 hours. The advanced course, however, has stiffer standards. The applicant must already be in sales work and must be making from $5,000 to $21,000 a year. And the college makes sure that he will be able to con-



Geissinger's Answer

To the adman's dilemma—giving his office the selling power of his ads—is to lean on Early American design. This secretary's office in Los Angeles came out looking more like an antique shop than a copy mill.

tribute to the training as well as benefit from it.

Neither course uses textbooks; instead, the course is based on illustrations from actual experience. To present these case studies, C.C.N.Y. has collected instructors whose vocation is sales, their avocation talking about it.

• **Selling Salesmen**—C.C.N.Y. has not overlooked one very important aspect of selling—the sale of the salesman to a prospective employer. Besides teaching the trainee the mechanics of getting a job, C.C.N.Y. gives him a pamphlet entitled "A Report on a Prospective Employee for Your Business." This contains an evaluation of the student in both text and chart form for presentation to an employer.

Panagra Sells Travel Through Travel Agents

What's the best way to promote tourist travel? Through consumer advertising? The answer, Pan American-Grace Airways thinks, is no. So Panagra has prepared what it calls a "Profit Promoter for Travel Agents."

• **A Kitful**—The Profit Promoter is a kit that contains all the things Panagra could think of that might help a travel agent plan and sell trips to South America. It was shown for the first time at the convention of the American Society of Travel Agents, in Savannah, Ga. This week the kits were being mailed out, free, to every A.S.T.A. member who is a Panagra representative.

The promotion material comes in an attractive, hard-cover portfolio with:

A SUGGESTED SALES-LETTER for travel agents to send out to their customers and prospects.

DETAILED OUTLINES of 16-day, 30-day, and 60-day all-expense air tours of South America. These tours were planned especially for this promotion.

ALL DATA that a travel agent needs to plan his own tailor-made all-expense tours.

COMPLETE INFORMATION, covering each South American country, on customs regulations, passport and visa requirements, local currency, climate, clothing, sports, holidays, sightseeing attractions, and hotel accommodations.

A "GOURMET GUIDE" to South America, prepared by Gourmet magazine. The guide lists the best eating places in each country, with additional data on clubs, hotels—and banks.

TIMETABLES, maps, and giveaway booklets of various kinds.

THE OFFER of free window displays and wall posters, if the agent wants them.

Free refills for the portfolio are available to the agent on request.

MARKETING BRIEFS

Canned-citrus buyers can get protection against price declines. Pasco Packing protects entire value of shipment first week, scales protection down after that.

•

Local sales needs will get closer attention from Gamble-Skogmo. It has three new semi-autonomous offices in Chicago, Minneapolis, Sioux Falls, S. D.

•

Lit Brothers, Philadelphia member of City Stores Co., has picked up a major stock interest in Swern & Co., Trenton department store. Will speed up Swern's modernization.

•

Taprooms with television must get an amusement license, says Pennsylvania's supreme court. So Philadelphia plans to tax TV-equipped bars.

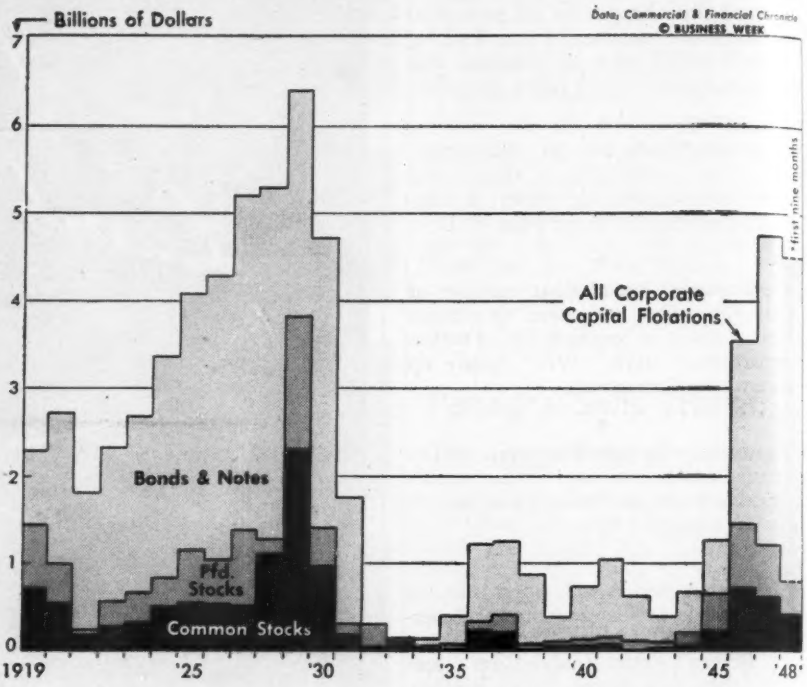
•

Movie stars' names will appear soon on candy made by Candy Corp. of America, subsidiary of Music Corp. of America. Bergen's Better Bubble Gum comes first, then Jack Benny Penny Pincher.

Druggist Heads A.R.F.

The American Retail Federation got a new president last week: Rowland Jones, Jr., former Washington representative of the National Assn. of Retail Druggists. More recently, he has been associated with Braun & Co., public relations counsellors. Jones fills the spot left vacant by Walter Morrow (BW—Feb.15'47,p8), who resigned in September because of ill health. Born in Gettysburg, S. D., Jones learned retailing in his father's drugstore.

FINANCE



THE DECLINE in the amount of new stock financing has the street wondering . . .

Where Is the Risk Capital?

Corporations are relying more and more on debt financing to raise new money. Wall Street thinks this is caused by a shortage of venture money which, in turn, is due partly to high tax rates.

Historically, American corporations have been able to get new capital for expansion from two principal sources: (1) out of earnings they have been able to retain in the business; and (2) through sale of new stock. In recent years, however, this has not been true—at least not to the extent it used to be.

• **New Money**—Corporate earnings are booming. And a smaller-than-usual share is being paid out to stockholders in the form of dividends. Yet retained earnings have not been enough to finance modernization and expansion programs. So it has been necessary for corporations to obtain a lot of "outside" money.

In the face of this need, however, sale of new stock has not risen. Debt financing (sale of bonds and borrowing from banks) is running at the highest level in history; sale of stock has been dropping in importance for many months (chart, above).

• **Significance**—What is the significance of this shrinkage? Many people feel that this is Wall Street's $64 question. And even among the experts who are supposed to know all the right answers, you will find a wide diversity of opinion.

Most Wall Street economists, for instance, will tell you (1) that the supply of "risk capital" is steadily dwindling, and (2) that a real shortage of venture money has now developed.

• **Argument**—Many government and independent economists, however, disagree. They feel that "no definite indications of serious quantitative deficiencies" in the supply of risk capital are apparent as yet. And they insist that Wall Street has badly overstressed the importance of the drop in equity financing.

One government man puts it this way: If you consider only those new issues that are sold to get money for plant expansion, new equipment, or new working capital, you find that the proportion of new stock issues to the total was higher until very recently than it was even in the boomtime 20's, except for 1928 and 1929.

• **Fact**—No matter which side of the argument you lean toward, there is one

fact that can't be denied: In the last couple of years, more and more companies that had planned to raise new money by selling common or preferred stock have been forced to turn to bonds or bank loans instead.

There's one other important point on which everyone is agreed: Several important new factors that have developed in the past decade have had considerable influence on the new-financing picture. Furthermore, it is certain that their influence will continue to be felt for a long time to come. Two of these factors have, perhaps, had the most far-reaching effects:

INCREASING INSTITUTIONALIZATION of the nation's savings, combined with a fundamental shift in the national-income pattern.

THE STEEP RISE in tax rates combined with fear among high-bracket investors of Washington's "share-the-wealth" philosophy.

• **Institutions**—In recent years, an ever-larger proportion of savings has been going into such places as life insurance, unemployment insurance, old-age pensions, and, most important, savings banks. The result has been a sharp shrinkage in the reservoir of risk capital. Reason: By law or policy, almost all such funds must be invested in "legal" holdings—government bonds, high-grade corporate bonds, real estate, or mortgages. Very little can be invested in new stock issues.

This trend toward institutionalization of savings has been caused, at least in part, by a basic shift in the nation's income distribution. Today a far greater share of the national income goes to farmers and workers than ever before. Neither of these groups is accustomed to investing their own funds; they have preferred to pass on its control to others with more experience—mainly savings banks and insurance companies.

• **Higher Taxes**—The effect of rising tax rates has been felt largely through their impact on high-bracket individual investors. It is to members of this group that investment bankers' salesmen have always devoted a major part of their efforts. But in recent years, these comparatively wealthy individuals have had neither as much money nor as much inclination to invest in new stock issues.

Their supply of investable cash has been cut by high personal-income-tax rates. And, because of high inheritance-tax rates, most of them now prefer to keep a larger portion of their holdings in more-liquid assets, such as cash and government bonds.

• **Playing It Safe**—Furthermore, many of those who do have cash available just aren't interested any more in risk issues as investment media. Some time back, they decided to "play it safe." (The New Deal's share-the-wealth philosophy is

thought to have had a good deal to do with this decision.)

So they have steadily been increasing their holdings of tax-exempt municipal bonds (page 96). They lose very little, income-wise, because of the big bite income taxes take out of dividend income. And they achieve one big advantage: Their portfolios are less subject to fluctuation in value, and are more easily marketable in times of stress.

• **Other Factors**—Several other factors have contributed to the current difficulty of selling new stock issues. Among them:

THE DISAPPEARANCE in recent years of foreign investment money (which once came to a sizable total).

HIGH MARGIN REQUIREMENTS, which apply just as much to new issues as they do to transactions on the exchanges. Some Wall Street authorities estimate that this factor alone has lowered the supply of risk capital by several billions of dollars.

THE POOR PERFORMANCE of the stock market since the 1942-1946 bull market burst apart. Many suppliers of risk capital are motivated by prospect of capital gain at least as much as by expected income—perhaps even more, because of the lower taxes on capital gains. And, in a sloppy market like that of the last two years, this incentive is lacking.

• **Not Serious?**—Those who argue that the shortage of risk capital has been overstressed have one big point in their favor: There have been no serious consequences so far. Most corporations that have needed new money have been able to get it, one way or another.

But this has not been all to the good. Many of these corporations have had to resort to debt obligations. And that is hardly a healthy trend. A recent New York Stock Exchange study of the risk-capital picture put it this way: Because of "inadequate supplies of private venture capital," industry has had "to resort, far beyond the limits of sound policy, to debt financing instead of equity financing." And that, says the Exchange, is dangerous.

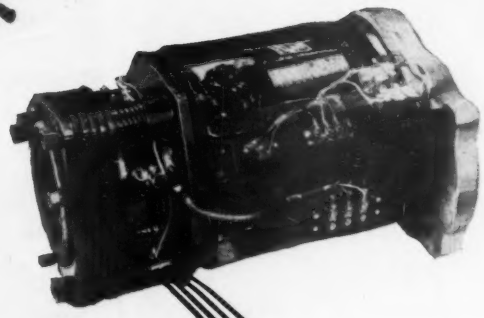
• **Topheavy**—It is easy, in good times, for a company to become topheavy with long- and short-term debt. And it isn't hard to meet relatively high interest and amortization charges.

But what if business should decline? Bank loans still have to be retired; contractual payments still have to be made on the long-term debt. Some companies may be able to meet these obligations by disposing of assets—usually at a loss. Others may be forced into bankruptcy.

• **Warning**—So, in these days of high, hard-to-cut operating costs, management should watch its P's and Q's carefully when it considers raising new money or working capital.

FIBERGLAS*

...helps provide dependable finger-tip control



Moving tons of earth in a hurry is an easy job with LeTourneau Tournapulls. Easy—because they're operated by finger-tip control. Just a flick of a switch is all that is required to start electric motors that load, steer, turn and empty these giant earth movers. And *dependable* motors are highly important in this automatic operation because these machines work under the toughest weather conditions. That's why LeTourneau provides added protection by using motors insulated with Fiberglas-base Electrical Insulating Materials.

Other leading manufacturers have found it's good insurance to have the added protection of Fiberglas-base Insulations in the electric motors they make or use. They've found, too, that these inorganic-base materials have helped solve problems such as the need for reduction in motor size, resistance to the effects of heat, overload, moisture, most corrosive acids and vapors, dust and many other causes of motor insulation failures. If you have a motor insulation problem, get more information about the advantages of these dependable materials by writing to Owens-Corning Fiberglas Corporation, Department 803, Toledo 1, Ohio, today for your copy of the "Fiberglas Electrical Insulating Materials" manual. Branches in principal cities.

In Canada: Fiberglas Canada Ltd., Toronto, Ontario,

LeTourneau Tournapulls, equipped with Fiberglas-insulated motors, generators and transformers, are manufactured by R. G. LeTourneau Inc., Peoria, Illinois.

OWENS-CORNING

FIBERGLAS

ELECTRICAL INSULATING MATERIALS

*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.

IN 1858, Bishop National Bank was just a basement on a dingy Honolulu street. Now . . .

IN 1948, its spacious, busy quarters tell graphic story of how . . .

Bank Paces Hawaii's Growth

Patriarch of Pacific Banks, Bishop National has backstopped islands' enterprise for 90 years, serves both big business and little people. With deposits of $210-million, it girds for Hawaii statehood.

To the men behind the walnut desks at the Bishop National Bank in Honolulu, it was an old story. Hawaiian business had run into a roadblock—this time the maritime strike. As the oldest and biggest bank in the Pacific, Bishop was shelling out last week to help sugar planters and others over the resulting payroll and inventory bumps.

• **Mainstay**—Different versions of the same problem have been milestones along Bishop's path for 90 years. In 1871, Hawaii's profitable whale oil business went to the wall. Bishop helped to plug that hole in the economy by lending money to the fledgling sugar industry. Now sugar is the biggest source of income in the islands.

Bishop staked James D. Dole's efforts to set up a pineapple industry, too. At that time, to more conservative mainland banking quarters, pineapple looked like a luxury fruit that might not pay.

• **Changing Scene**—Bishop National Bank isn't yet 100 years old. But it has lived through the reigns of native kings

"I wouldn't buy that one, Dear"

It was back in the early years of the century, and the publisher had a long record of successes in other cities. But, somehow, he missed the pulse of Philadelphia. His newspaper never thrived, and eventually suspended publication —while other local papers grew and prospered and went on to become, as they are today, among the largest in the nation.

Philadelphia, you see, knows what it wants and gives generous support to those who supply it. You can share in that support if you are doing business here, in America's third largest market. For The Pennsylvania Company knows the city thoroughly, and will help *you* to a profitable understanding of its character and needs.

This will mean a smoothly running business for you, as it has for thousands of our clients—including small and moderate-sized businesses, as well as two out of three of America's largest corporations.

You will have full access to our great store of business and financial records. Friendly, alert officers will help you solve any problem. And payroll and other banking routines will be simplified, for our 18 offices—more than any other local bank—cover the city and suburbs.

Check clearances are especially speedy because of our heavy use of air mail. Our transit department operates on a 24-hour-a-day basis. In fact, we can expedite *all* your banking affairs . . . make it easy for you to become a member of the city's prosperous business family. Write us and we'll arrange a meeting.

18 OFFICES

THE PENNSYLVANIA COMPANY

for Banking and Trusts

FOUNDED 1812

PHILADELPHIA

MEMBER FEDERAL RESERVE SYSTEM • FEDERAL DEPOSIT INSURANCE CORPORATION

and queens, through the islands' brief stretch as a republic, and through 50 years as a U. S. territory. Now Hawaii is on the brink of statehood.

Despite all the changes, the bank still fits the islands like an old shoe. That's because it has learned to grow with the foot.

The bank began in a sort of fairy-tale atmosphere. One of its founders, Charles Reed Bishop, was a New England dry-goods salesman, who married a beautiful Hawaiian princess. Bishop, together with William A. Aldrich, started the concern as Bishop & Co. in 1858.

Its basement room was the first bank in the Pacific. It was a stone's throw from the waterfront, where busy whaling ships tied up. Many of its first deposits were gold slugs, and gold and silver coins brought from the far corners of the world by the whalers.

In 1919, the bank incorporated; in 1929 it consolidated with four others into a national bank.

• **War Boom**—The recent war gave Bishop its big push. Its deposits climbed from $67-million before the war to $276-million by the war's end. It built a $50,000 underground vault in an extinct Honolulu crater to store some of its cash and records.

• **Normal But Bigger**—Since the war, deposits have declined slowly. Most U. S. funds have been withdrawn, and savings accounts are feeling the pull of returning "normalcy." But the bank is still a far bigger institution than it was in pre-Pearl Harbor days. On June 30, deposits were $215-million. Recently they stood at about $210-million. The latest drop coincided with the West Coast maritime strike and a rash of local labor troubles. But that's still three times what they were before the war. Bishop's combined capital, surplus, and undivided profits come to more than $8.4-million. And even though loans have reached record proportions, its cash and government bondholdings equal 78% of all its deposit liabilities.

• **Big and Small**—The bank's big business is still with Hawaii's big business—sugar, pineapples, tourists, the armed services. Bishop loans are now helping the sugar industry to convert to mechanized operation (BW—Jun.12'48,p46).

But the thing that makes the bank an "old shoe" to islanders is its ready help to the "little people"—its willingness to make the garden variety of loan.

It has the reputation of being Hawaii's main agency for FHA and GI home loans.

A lot of institutions across the nation are turning these down as unprofitable. Bishop has opened a special department for these loans; it grants more than all the other lending institutions in Hawaii combined.

Through 20 branches, Bishop now

reaches into every major island of the chain. It keeps, without seeming to have to try, the dominance it has held in the banking field from the day it first opened.

Present head of the bank is George S. Waterhouse. Waterhouse, now 73, took a job as a clerk at the bank in 1900. It took him 45 years to scale the ladder through successive steps to teller, bookkeeper, cashier, vice-president, and now president.

• **Distance a Problem**—One of Waterhouse's problems is a hard one to get around: distance. That factor complicates relations with the mainland. There's a tendency to consider Hawaii "foreign." Cashing a Bishop check on the mainland isn't always easy—even though there are several hundred Bishop correspondent banks in the 48 states.

And distance explains the bank's one qualm about statehood for Hawaii. When the Senate was drawing up the statehood bill, it added an amendment that would make all national banks in Hawaii (that is Bishop—it's the only one) join the federal reserve system. At present, no banks in Hawaii or Alaska are members.

The closest federal reserve bank is 2,000 miles away in San Francisco. Bishop would have to keep cash reserves with the federal reserve bank, but because of the distance, it would have to hold on to the reserves it already keeps in Hawaii.

• **Two Reserves**—The net effect, says Waterhouse, would be to tie up about 25% of the bank's money, instead of the 15% tied up now.

FINANCE BRIEFS

October's Private Sales of new securities issues to insurance companies and others totaled almost $369-million—more than 57% of all offerings.

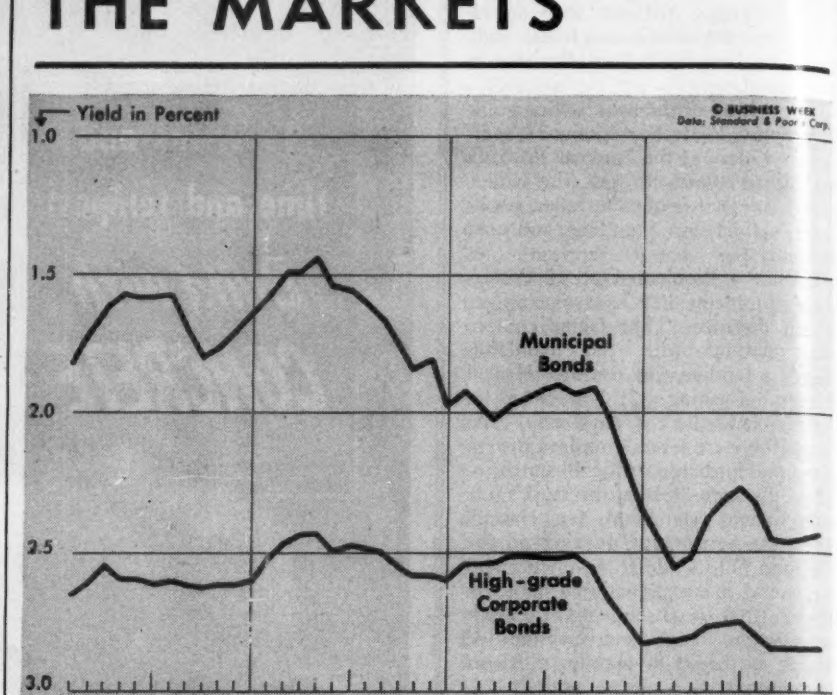
•

Opposition to Nickel Plate's proposed lease of Wheeling & Lake Erie (BW—Oct.23'48,p105) cropped up at ICC hearings: (1) Some Nickel Plate preferred stockholders demand consolidation; (2) Pennroad wants all Wheeling common not owned by Nickel Plate retired through a sinking fund; (3) Akron, Canton & Youngstown R. R., a Nickel Plate competitor, is afraid the deal would cut its income sharply.

•

Mack Trucks will pay no more 1948 dividends. Reason: the sharp drop in its recent earnings (BW—Nov.20'48,p95). On the basis of present capitalization, 1947 dividends came to $2.75 a share; this year's will total only $1.50.

THE MARKETS



Election Firms Bonds

While the stock market droops, bond traders read election as a promise of continued low interest rates. Threat of higher taxes is another fact that increases demand for municipals.

If your firm is trying to raise new money, the bond market will give you a far better break than the stock market. And that's even more true today than it was before the election.

• **Bond Surprise**—Since Truman's victory, stock traders have been wringing their hands and moaning. You might have expected bonds to go to pieces, too. Since 1946, there has been a long-term uptrend in yields and a corresponding downtrend in prices (inverted scale chart, above). And in the months before election, the best that bond prices could do was hold about even.

Security Price Averages

	This Week	*Week Ago*	*Month Ago*	*Year Ago*
Stocks				
Industrial	150.2	150.8	163.8	150.5
Railroad	43.9	44.5	50.0	41.1
Utility	67.3	67.1	72.2	68.0
Bonds				
Industrial	94.6	94.3	95.2	100.3
Railroad	85.1	85.0	85.5	84.5
Utility	94.1	94.0	93.9	98.8

Data: Standard & Poor's Corp.

But in the weeks since the election upset, bonds have begun to show their first real strength in months.

The main reason for the new firmness in bond prices is the general belief that four more years of a Democratic administration mean four more years of easy money. Before the election, traders were afraid that the Federal Reserve System soon would back out of its commitment to support the prices of government bonds at par. That would have given the whole interest rate structure an upward shove.

• **Short-Term Rate**—Now the market figures that the support policy will continue indefinitely. And this confidence got an additional boost when Secretary of the Treasury John W. Snyder announced that he would keep the short-term government rate at 1⅛% for the January financing.

Long-term governments have pulled themselves up above the support prices for the first time since July. In the past couple of weeks, the Reserve Banks even have been able to do some modest selling instead of buying heavily to brace up the market.

• **Municipals Up**—The star performers in the bond markets, however, have

been the municipals rather than the Treasuries. Just before election, the Dow-Jones yield index of 20 state and city issues stood at 2.45%. Since then rising bond prices have backed it down to 2.31%. Meanwhile, dealers have been able to work off a good part of the heavy inventory they had on their hands at the start of the month.

Municipals are benefiting from the generally easier tone in money rates. But they also have some special advantages at the moment.

For one thing, the threat of higher taxes in the new Truman administration makes the tax exemption feature of municipals look more attractive to high-income buyers.

In addition, it begins to look as though the volume of new municipal financing in coming months will be less than the market had expected. In the election, proposed bond issues totaling about $1.2-billion were submitted to the voters for approval. Only about 70% got by. Dealers had expected better than 95% to get clearance.

• **Corporates Firm**—Corporate bonds haven't bounced like the municipals. But they have firmed up significantly, especially the high grades. Some of the big institutional investors have begun replacing short-term paper with long-term corporates. Rates on new issues are not noticeably lower, but a properly priced offering moves fast.

• **Long-Term Trend**—As things look, though, the present market is only a level spot on a long-term downtrend in bond prices that has not yet ended.

As long as the business boom continues, new offerings will keep pouring onto the market. And until the inflation threat is past, the government monetary authorities will be trying to tighten credit in one way or another.

The Federal Reserve's support policy for government bonds seems safe for a while, but the Reserve Board can try other methods.

CCC to Keep Export Grain Market Control

Private interests in the grain trade this week were resigned to an unwelcome fact: The export market isn't going to be turned back to them.

• **Hope and Despair**—Many had hoped that, in wheat as in many manufactured products, a free market would be restored under the Economic Cooperation Administration. They had been encouraged in this by ECA's chairman, Paul Hoffman, who authorized the return of grain exports to private channels on Dec. 1. This conformed to instructions written into the foreign-aid law.

But Hoffman's stand didn't get the Dept. of Agriculture's O.K. Secretary Charles F. Brannan wants buying for foreign needs kept under Agriculture's Commodity Credit Corp. What's more, he has won President Truman over.

• **"Efficiency"**—Agriculture argues that CCC is functioning efficiently as a centralized buyer. It argues further that private traders would have to try to export through low-cost ports—which are already jammed. CCC bypasses them; it can add the extra cost into its price because it is the sole exporter.

This argument about not clogging ports ostensibly is the reason that Truman has turned thumbs down on private grain exports. Probably a more important reason is the greatly increased influence of Brannan. He is credited with setting the tone of Truman's campaign on farm policy—a tone that brought Truman a surprising vote in the corn and wheat country.

Thus, the grain traders figure that Brannan has a good chance of getting Hoffman's policy thrown out. They doubt that the conference asked by Hoffman after Truman's return to Washington will gain him anything.

• **Other Motives?**—The trade suspects that Agriculture has motives in this argument that it hasn't mentioned. One is the fact that CCC is the real administrator of government supports for farm prices at 90% of parity. Presumably, if it is the sole exporter and doesn't have to compete with foreign buyers in the home market, prices can more readily be prevented from jumping around. That in itself helps to simplify support maneuvers.

More important to private traders than the grain involved is the principle. They ask: If the CCC is accepted as being more efficient than private traders with wheat and corn, how many other commodities will it try to get?

• **Trouble From Truman**—Meanwhile, the grain trade also is worrying about living with the new Truman Administration. It has heard the President denounce speculators for sharp price movements in the past, and it wouldn't be too surprised if it heard from him on the same subject again.

In short, commodity exchange members are afraid anything that might happen in the future would be the signal for the White House to ask Congress for new restrictive regulations. With a Democratic Congress, the trade feels such restrictions could be enacted.

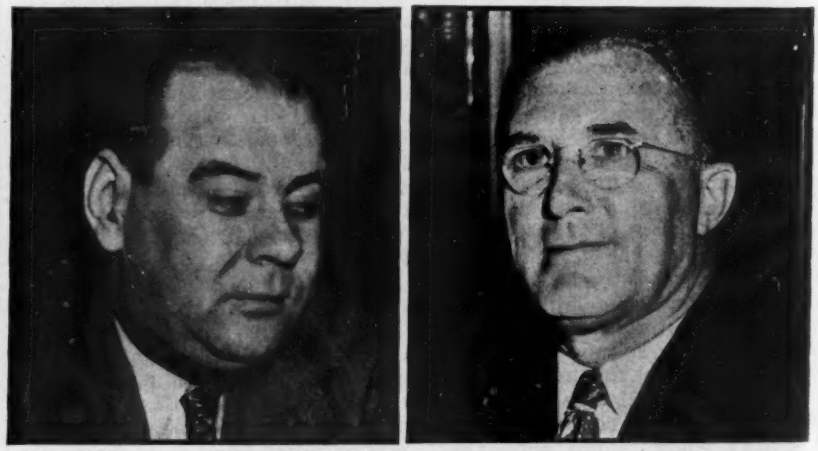
They know from past experience that the very grain states which went for Truman are the ones where farmers always demand the closing of exchanges on any major drop in prices. Their only protection now is that federal supports so far have been effective in preventing prices going much below the promised 90% of parity.

LABOR

Who Will Set the Pattern fo

STEEL? C.I.O.'s Murray (left) and U. S. Steel's Fairless have a July date

AUTOS? U.A.W.'s Reuther (left) and Chrysler's Keller face a June session



ELECTRICAL FIELD? U.E.'s Fitzgerald and G.E.'s Wilson may meet in April

ourth Round?

Henry Ford II says it's "probably inevitable," but it's a question in which major field bargaining will start.

When Henry Ford II announced last week that a fourth round of wage increases is "probably inevitable," a few businessmen found the idea shocking. But they were both surprised and puzzled that Ford made his view public.

• **Pattern Makers**—What Ford's announcement didn't say was who would set the fourth-round pattern. It held no promise that autos would lead the way—although the United Auto Workers, along with the unions in steel and electrical manufacturing, is one of the potential pattern-making unions. But management circles are betting that, whoever sets it, the wage raise will run at something less than 10¢ an hour.

Traditionally, management meets wage negotiations with a tight-lipped refusal to acknowledge that anything at all may come of them—even though it generally assumes that some increase is inevitable. The blank front is considered a shrewd bargaining tactic. The reasoning is that it gives management a "first position" with which to oppose labor's "first position." The latter is likely to be an extreme demand which has to be disposed of before serious talk can begin.

• **Less Extreme**—A somewhat more adult attitude has been gaining ground in the last few years. It presumes that labor's "first position" may be a defensive reaction to the expected "first position" of management; and that if the employer drops the nonsense the union may give up the fantastic. This would be helpful all around. In some cases it might even help avoid strikes.

The present East Coast longshoremen's strike (BW—Nov.20'48,p120) is a case in point. As negotiations opened, the employers said there would be no wage increase; the union demanded a 50¢-an-hour raise. Behind the union's negotiators stood a membership which had been all steamed up over the idea of a 50¢ demand. The leadership did not, of course, tell them that this was just a bargaining figure.

The negotiators eventually agreed on a 10¢-an-hour increase. But the disappointed membership immediately repudiated the agreement and struck.

Perhaps a more realistic bargaining

approach would not actually prevent such strikes. But at least it would cut down the bitterness which often attends negotiations, by eliminating the necessity of one party's having to pour scorn on the other for its "absurd" proposals.

• **Central Problems**—These are the central problems of the fourth round: Will the 1949 upward wage adjustments come without costly strikes, and without charging employee relations with a new measure of bitterness?

It's going to be a tough round—not so much because the wage demands will be high, but largely because the unions figure that this is a good time to press issues which will naturally run into employer resistance. Among these are a great variety of welfare provisions, and the annual or guaranteed wage. The last has been taken down from the shelf where it had been put because public opinion was unsympathetic to unionism. The election result gives labor a new determination to take up these matters again.

• **Advantage**—In such an atmosphere, some employers see a distinct advantage in easing the friction which negotiations always generate. They don't want any wrangling that isn't strictly necessary. It is employers of such a mind who welcome Ford's policy of frankness.

Right now it looks as if the potential pattern-making unions will try to coordinate their bargaining as they did last year. Even this may be upset by the fight over Communism now going on at the C.I.O. convention. It could leave such deep scars that the right-wing auto and steel unions might refuse to cooperate with the left-wing electrical group.

• **Big Dates**—Here are the important fourth-round wage dates for 1949, by industries:

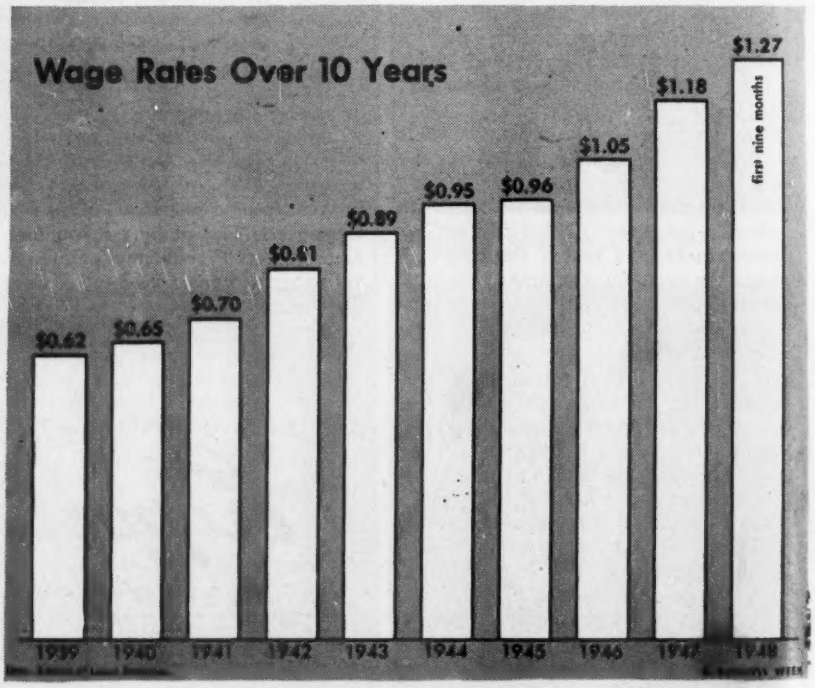
Automotive. General Motors is committed to give a 3¢ "annual improvement" raise to the United Auto Workers (C.I.O.) and United Electrical Workers (C.I.O.) on May 29, 1949. It also will continue its quarterly cost-of-living adjustments in pay (BW—May 29'48,p96) during 1949.

Chrysler's contract with U.A.W. runs out Aug. 1, 1950, but can be reopened on wages on June 15, 1949. Chrysler gave a 13¢ third-round raise in 1948.

Ford's contract expires July 15, 1949. There is no wage reopening before that date. The entire contract will have to be renegotiated in 1949—which can mean trouble. Last year Ford gave a belated 13¢ raise, plus "fringe" increases; U.A.W. said the package amounted to 16½¢.

The toughest fourth-round fight may come in small U.A.W. shops. One place to watch: Detroit tool and die shops, where 75 employers hire 5,000 U.A.W. members. A strike can paralyze the industry. Contracts run to July 22, 1950, with a wage reopening on May 1, 1949.

Electrical Manufacturing. The Westinghouse contract with U.E. expires Mar. 31, 1950, but may be reopened on wages once in 1949 (the union probably will make it on Apr. 1). General Electric also has a contract running into 1950, with a wage reopening in 1949. U.E. is expected to negotiate concurrently—but



A 10-YEAR RISE in the average hourly wage rate in all manufacturing employment looks as if it won't stop in 1949. Another step up seems certain

HENRY FORD II: He faces a July 15 reopening date with the C.I.O. He may pace the fourth round

JOHN L. LEWIS: The coal contracts expire June 30, but the U.M.W. can initiate bargaining on 30 days' notice

GWILYM PRICE: His Westinghouse contract with U.E. ends Mar. 31, 1950, but a reopening will come in 1949

separately—with G.E. and Westinghouse.

Steel. Philip Murray's contract with U. S. Steel runs to Apr. 30, 1950, but a reopening on wages and social-insurance issues is due in July, 1949. Murray, mindful of the lesson of 1948, stipulated in the current pact that the union can strike in 1949 if a wage dispute exists.

Coal. Bituminous contracts run out June 30, 1949, but can be terminated earlier on 30-day written notice to employers. It's now unlikely that wage talks will be attempted before June.

Rubber. Firestone's contract with C.I.O. rubber workers expires Mar. 1, 1950, but either party can get a wage reopening after Apr. 14, 1949, by 60-day notice. Other rubber contracts (Goodyear, General Tire, U. S. Rubber) have similar termination dates and reopenings. The outlook is for the wage issue to come to a head in rubber in mid-June.

State Closed-Shop Bans Will Feel T-H Changes

The scope of state laws that now ban the closed shop will almost surely become narrower. The reason: changes that Congress will make in the Taft-Hartley act. As it stands, the federal law gives states the right to regulate all forms of compulsory union membership within their borders—whether intra- or interstate business is involved.

• **Restoration**—Secretary of Labor Maurice J. Tobin has declared that the closed shop must be restored in any new law that the new Democratic-controlled Congress substitutes for the T-H act. Tobin will have a big voice in what goes into the new law.

Such a move would probably restore the closed shop for employers under federal jurisdiction even in those states which now forbid it.

• **How States Voted**—In the Nov. 2 election, voters in Massachusetts and New Mexico rejected closed-shop bans proposed in those states. In a June referendum, however, North Dakota citizens outlawed the closed shop.

In Arizona, the voters this month approved an enabling act to back up the state's constitutional amendment to bar the closed shop. The constitutionality of the Arizona amendment and similar bans in two other states—Nebraska and North Carolina—were attacked before the U. S. Supreme Court last week by the American Federation of Labor.

"Refusal of members of labor organizations to work with nonmembers is an age-old practice indispensable to unions in modern society," argued Herbert S. Thatcher, A.F.L. attorney.

The three cases before the court on

the closed shop issue involve: American Sash & Door Co. and others in Arizona; Northwestern Iron & Metal Co. and others in Nebraska; and George Whitaker and others in North Carolina.

Coast Strike Ending; C.I.O. Is the Guarantor

Management under contract to left-wing unions will be watching the Pacific Coast waterfront. To end the longshore strike there, the national C.I.O. this week guaranteed that the explosive longshoremen's union will abide by its contract.

• **T-H Affidavits**—At the outset of the strike three months ago the Waterfront Employers Assn. took a stand: no more bargaining with irresponsible union leadership (they meant Harry Bridges).

Waterfront men made no secret of their conviction that Bridges and his aides draw their inspiration and orientation from the Communist Party. Once the strike began, the employers refused even to see the Bridges group until they signed the non-Communist affidavits written into the Taft-Hartley law.

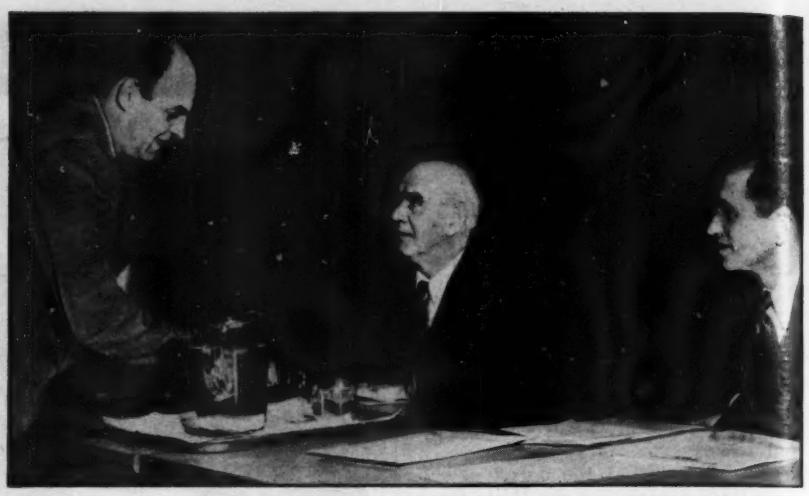
• **Sudden Collapse**—For two months the stevedoring people mobilized support of their anti-Communist stand among trade organizations. From chambers of commerce they accumulated bales of resolutions of support. Then suddenly they caved in.

Why did the employers back down? Several theories have been advanced. One is that President Truman's surprise victory at the polls chilled their ardor for a fight that was rooted squarely in a law he is pledged to kill. For all its plausibility, that theory overlooks the fact that negotiations for the C.I.O. guarantee of a contract were begun before election day.

• **Will It Stick?**—It's more likely that the waterfront people felt their supports crumbling. The peace formula was evolved from overtures made directly to Philip Murray, president of C.I.O., by Almon E. Roth, president of the San Francisco Employers Council.

A question still to be answered is how the C.I.O., as guarantor and signatory to the pact, can persuade the militant Bridges union to observe its contract if the union continues its policy of direct action on the job.

The Pictures—American Home—85; Ben Schnall—84; Int. News—104 (top); Keystone—109; Sovfoto—110; Vachon-Standard Oil Co., (N. J.)—26; Wide World—98, 101, 115.



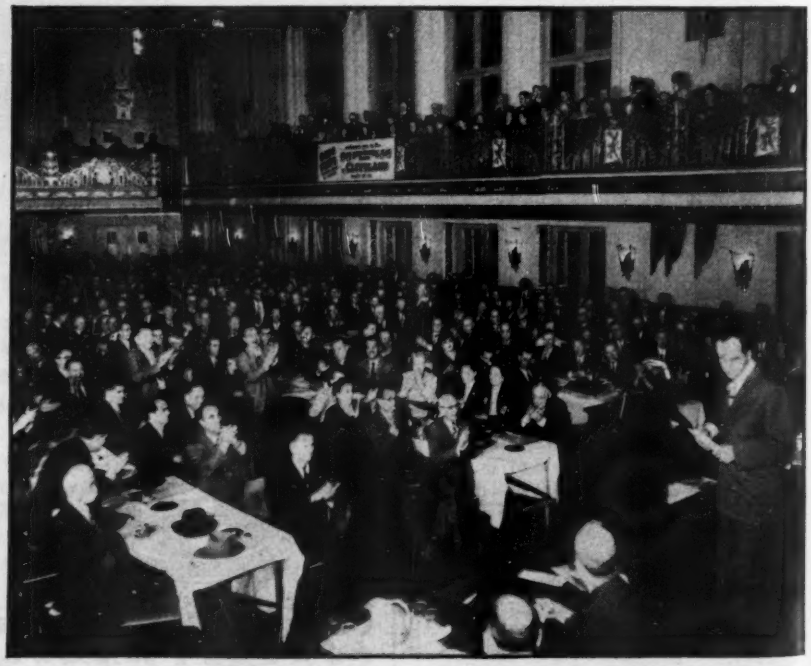
AT C.I.O. MEETING: J. Curran, P. Murray, J. Carey join in the anti-Communist camp

Two Conventions: Two Big Issues

Competing for headlines, A.F.L. in Cincinnati and C.I.O. in Portland, Ore., were winding up their annual meetings this week. For the last five years, they have fought for the news spotlight by scheduling their conventions at the same time.

• **Left vs. Right**—C.I.O.'s most dramatic actions centered on its perennial fight between the left and right wings. It booted out of control of its New York City affiliate a clique of officers who had consistently followed the Communist Party line. It promised similar rough treatment for other leftists who deviated from C.I.O. policy. No one thought that the Communist problem in the C.I.O. was liquidated. But it did look as though the leftists were being isolated.

• **Political Forum**—The most important fact out of the A.F.L. gathering so far was its manifest determination to stay in politics. It provided a forum for such diverse political figures as Senator-elect Russell Long of Louisiana and Senator-elect Herbert Humphrey of Minnesota. Long is a bitter-end battler against the Truman civil rights program; Humphrey shoved that very program down the throat of the platform-makers at the Democratic national convention. All A.F.L. seemed concerned with was that the two agree to work with the federation in Washington.



AT A.F.L. MEETING, talk is political. Senator-elect Humphrey addresses convention

INTERNATIONAL OUTLOOK

Western Europe's rearmament program is now worry No. 1 at ECA's Paris headquarters.

Marshall Planners flinch at the thought of any increase in East-West tension.

They know that arms programs already in the works are putting a squeeze on recovery schedules. More tension would bring an expansion of military production. And that would be sure to upset western Europe's "Master Plan" for recovery before it gets off paper.

•

There are problems enough in trying to fit each country's four-year plan into the Master Plan. These alone probably won't be ironed out before March. Here's why:

(1) The exports that the various Marshall Plan nations figure on don't fit with the imports they plan. When the Organization for European Economic Cooperation (OEEC) added up the national plans, it found that western Europe planned to sell itself a lot more than it planned to buy from itself. Gen. Clay's own western Germany was one of the big offenders.

(2) Continental nations fear Britain won't buy enough from them—especially enough of their luxury stuff. To continentals it looks as though Britain's austerity program were intended to keep London solvent at Europe's expense. Austerity could make sterling as scarce as the dollar in Europe.

(3) The French capital investment program is too ambitious, OEEC thinks. And France has to be sold on an export drive like Britain's—even if it means some British-type austerity for France.

(4) The U. S. won't be buying as much in Europe as the individual plans assume. Paris planners think that the hitch here is the U. S. tariff wall. U. S. experts say unrealistic exchange rates and inefficient production have as much to do with it.

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Most exports from Bizonia will be free from controls after Dec. 1. And import controls are to go soon, too.

This is the first step in getting rid of the Joint Export Import Agency (JEIA). Further red-tape-cutting is in the cards. Ultimately, supervision of foreign trade will be handed over to the forthcoming West German government (BW-Oct.16'48,p115).

Starting next month German exporters no longer need JEIA approval for each shipment. They only have to register shipments with JEIA in advance. This allows JEIA to keep its finger on foreign exchange returns.

There are some minor exceptions to the new ruling:

(1) JEIA will still have to approve shipments of scarce goods that are subject to allocation. Big items: coal and scrap.

(2) The French aren't ready to free exports from their zone. But they promise to follow suit shortly.

(3) Berlin, of course, will be excluded until the blockade is lifted.

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West German trade got another boost this week when France signed the biggest trade pact made to date with the three western zones. It calls for exchange of $300-million worth of goods over the next year.

This is the first deal made with "Trizonia" as a unit. And it is the first time the intra-European payments scheme has been put to work.

Under the payments scheme, France has $77-million worth of "drawing rights" on West Germany's Marshall Plan kitty for this year. The money will

pay for German goods France can't cover by exports to Trizonia. These drawings rights will all be needed under the new trade agreement.

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Paris diplomats think the U. S. may have to give ground on the question of who is to own the Ruhr industries (page 109). They think de Gaulle's blast against the Anglo-American decision to increase German control over the Ruhr did the trick.

This is how the French are arguing: de Gaulle implied that if he came to power he would be willing to cut loose from western Europe and get along without the Marshall Plan in order to get his way in Germany. The U. S. couldn't afford this. So the U. S. will have to bolster the present regime against de Gaulle. That could only be done by compromising on the Ruhr.

Washington expressed "pained surprise" at de Gaulle's railing. But it also insisted it would stick to its guns on the Ruhr question.

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The U. S., Britain, and France are getting ready to sound out Russia again on a peace treaty for Austria.

Washington thinks it would be worth the effort—if only to test how deep the Cominform-Tito rift is. A conference late this year or early next would indicate how far the Kremlin is willing to go in renouncing Tito's claim to Austrian Carinthia.

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Current notes on business abroad:

International General Electric Co. has signed an agreement with the government of Siam to survey the country for sources of hydro-electric power. The survey will take ten months and won't cost Siam a cent. G. E. engineers will do the job. G. E. will probably get any resulting contracts. Now that Siam is a member of the World Bank, chances for economic development look bright. With power provided, the country may look to the U. S. for development of an electrified railway system and numerous irrigation projects.

Renault, France's big, state-owned automobile company, is going to float a 25-yr., 1-billion franc loan ($4.7-million at current exchange rate). Effective interest rate will be a little more than 6%. That shows what inflation can do. Last year when Renault did some financing, it paid 4½%; in 1945 it paid 3½%.

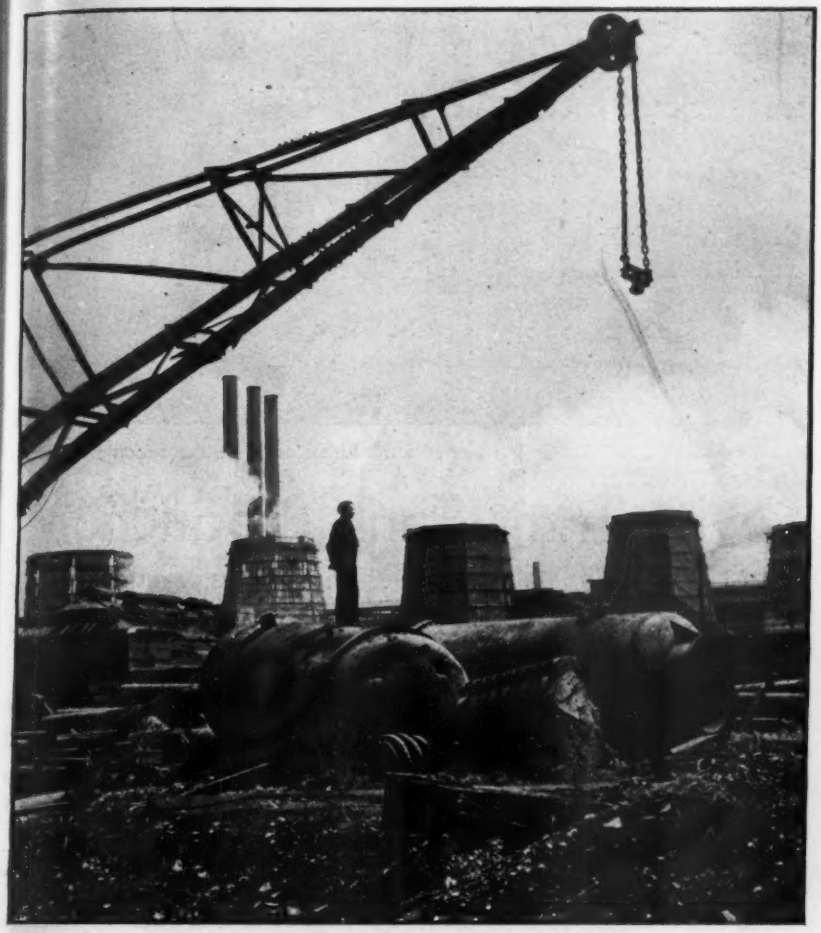
Anglo-Transvaal Consolidated Investment Co. (jointly owned by U. S. and British interests) is considering a $50-million project to produce oil from coal near Vereeniging, South Africa. Anglo-Transvaal officials are in the U. S. now talking over the scheme with Texas Oil Co. technicians. The South African government has granted the license. It hopes to save $20-million a year on imports of gasoline and diesel oil.

Yoder Co. of Cleveland is shipping a $650,000 welded-pipe mill to the Di Tella Corp. of Buenos Aires. Yoder also has an order from Page-Hershey Tubes, Ltd., of Canada for two of these mills, plus auxiliary equipment.

John Brown, Ltd., British steel firm, may buy into the Que-Que steel works of Southern Rhodesia. The plan is for John Brown and several other British companies to put up $10-million or more to expand capacity at Que-Que. They want to boost capacity from about 140,000 tons a year to over 500,000 tons.

The Budd Co. of Philadelphia is supplying the Fiat Automobile Co. of Turin with special jigs, dies, and other tools. These will be used to raise production of Fiat's new four-cylinder auto.

BUSINESS ABROAD



HEAVY INDUSTRY is the core of a longtime . . .

Battle Over the Ruhr

Western nations still wrangle over who is to get the rich products of the valley. But one thing seems sure: Management of the industry in the area will gradually go back to the Germans.

FRANKFURT—This week in London the U. S., Britain, France, and the Benelux nations were wrangling about who is to get the rich products of the Ruhr coal and steel industries. They had agreed last June to set up a six-power authority to allocate the Ruhr output between Germany and the rest of Europe. Now the time had come to work out the details, create the allocation authority.

• **Dim Outlook**—Chances for an agreement look dimmer than they have in months. The new U. S.-British regulations for Bizonia's industries brought the French right up on their feet, swinging.

What drew immediate fire from the French were the relatively unimportant provisions for: (1) handing back day-to-day management of Ruhr industries to the Germans; (2) leaving "ownership" of these industries in German hands.

• **Failure**—For a long time the French have been eyeing Anglo-American policy in Germany with apprehension. They have been plugging for international ownership of the Ruhr, in which they would have a dominant voice. Despite clear indications that the U. S. and Britain would not buy such a policy, the French have kept right on trying to sell it. Paris has held up the merger of the French zone with Bizonia to put pressure on Washington and London.

It is obvious that the latest U. S.-British action has slammed the door against the French. Gen. Charles de Gaulle has called it "the gravest decision of the 20th century." Now de Gaulle hints that if he has any say in the matter the French zone will never be returned to Germany.

• **Stymie?**—This attitude may stymie the London conference. But Bizonal officials are pushing ahead with their plans anyway. For many months they have had their hands full with squabbles among themselves. Now these, at least, appear to have been settled.

U. S. and British occupation authorities are agreed that, aside from passing management and ownership back to the Germans:

(1) The U. S. should have the big say in a joint Anglo-American steel control.

(2) Decartelization should not be allowed to break down the vertical integration of the coal and steel industries.

• **U. S. Dominance**—The new laws for reorganization reflect the dominance of U. S. policy over that of the British. In the case of the Ruhr steel industry a lot of British organizing will have to be undone.

The new laws spell the end of Britain's "operation severance." Under it, the British had segregated only the steel-producing units from the old combines. These they set up as "interim companies" under the British government's North German Iron & Steel Control (BW—Jun.19'48,p120).

• **Separation**—The British plan had the effect of wiping out the vertical organization of the old combines. The only possible future of Ruhr steel industries under the British plan seemed to be nationalization.

The U. S. violently opposed "operation severance." It wanted to organize the steel industry on the most efficient basis. It also wanted to leave it in a position where private enterprise could run the show if the German people wanted. That meant keeping as much vertical integration as possible.

The U. S. has won its point. A joint U. S.-British steel control group has been formed to run the Ruhr steel industries. It is modeled after the bipartite group now ruling over the Ruhr coal mines. Actually, the new group gives the U. S. the dominant voice in the steel industry, just as it now has over the coal mines.

• **Trustees**—With the new steel group comes a special Steel Trustee Assn., made up of 12 Germans picked by the military governors. The association will take over the assets of the "steel-producing units," which were created under "operation severance."

The steel-control group and the Trustee Assn. will propose new operating companies for the steel industry. In all cases they will provide the steel-pro-

ducing units with their normal adjuncts—such as power plants (in some cases, coal mines and coke ovens). But some steel-producing plants will have to be recombined.

• **Details**—When the new steel-operating companies have been formed, management will be placed in the hands of from three to five German trustees. These trustees will have no power over the distribution of earnings. But otherwise they will assume normal ownership functions. Directors and managers of the new companies have definite prospects of becoming shareholders and holding their position indefinitely—if the German people vote for private enterprise.

Probably 11 new steel companies will be formed under this setup. They will replace the 10 steel companies formed so far by the British, as well as some of the 15 Ruhr coal companies now operating.

• **Coal, Too**—The Ruhr coal industries are in for a similar overhauling. The joint U. S.-British Coal Control Group will attack the problem in the same manner and in collaboration with the new steel group.

The Coal Control Group will define the assets of each new coal company—again with an eye to free enterprise operation. For example, the coal group will decide what pits, power, and transportation facilities—as well as by-product units such as hydrogenation installations and nitrogen plants—should be grouped to form a new company. Then, as in the case of steel, German trustees will be appointed to take over.

• **Free Enterprise?**—Now that the U. S. has succeeded in organizing the Ruhr for free enterprise, the big question is: Will the Germans keep it that way?

The strong Social Democratic Party is plugging hard for nationalization. Its big argument is that this would insure doing away with the old cartel arrangements. After all, say the Social Democrats, the big industrialists were Hitler's best supporters.

• **Problem**—The U. S. probably can't answer this argument completely, but it is planning to blunt it a lot. It has strictly banned old owners from any say in their former businesses. (They are entitled to some compensation out of the proceeds of the disposal of their shares. Terms for such compensation haven't been set yet.) The problem is to find the "right" Germans to take their places.

The U. S. military government has already had a tough time with this problem in the case of the I. G. Farben industries. They would like to see the new shares spread widely among the German people—particularly the workers. But they have found that the body of investors in Germany has been traditionally small.

TOO MANY TANKS? Or less fear of war? Either could be the reason why . . .

Soviet Trims Tank Production

The army will get fewer—though faster and lighter—tanks. Huge output has been accompanied by defective materials, faulty workmanship, transportation bottlenecks.

In its best production month during the war, U. S. industry turned out military tanks at a rate of 56,000 a year; it actually produced just short of 30,000 in its best year (1943). Today, in peacetime, the Soviet Union is producing somewhere around 65,000 tanks a year.

• **"Reconversion"**—But now it looks as though the Soviet high command has finally begun to think in terms of "reconversion." Very quietly it has started to cut back tank production. This information has leaked out despite the best efforts of the Kremlin's secret police. Most of it comes from the staff of highly skilled technicians "imported" from Germany.

Why the cutbacks? Coming at a time when there is talk of a Russian peace-offensive, it could mean that the Soviets really have decided that there isn't going to be a war soon. On the other hand, it could simply mean that the Red Army has stocked up on tanks and is turning to other vital materiel. That's what the U. S. did at one point during the war.

• **Clews**—Here are some recent indications of what's going on in the Soviet tank industry: One big plant at Gorki, 250 mi. northwest of Moscow, curtailed production a few months ago; some plants at Nizhnii-Tagil in the Urals have turned to the production of railroad cars; some sort of reconversion is in process at Sverdlovsk, also in the Urals.

Until now Russia's tank industries and their 135,000 workers have been operating around the clock seven days a week. During the year the plants close down for only three days. One of these holidays—Sept. 12—is "Tankists' Day." On this day workers and soldiers who deal with tanks are exalted to the heights (picture, page 112).

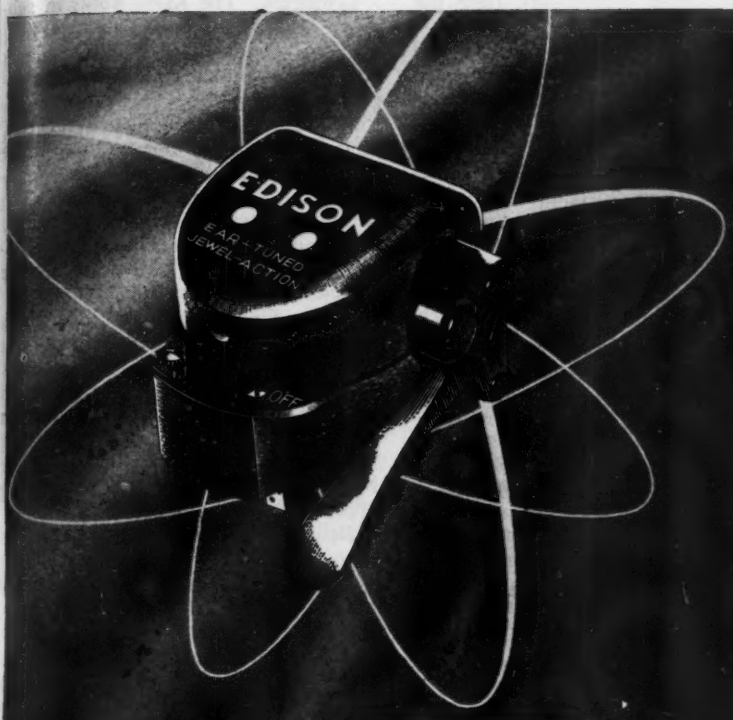
• **New Designs**—The Russian tank—no mean weapon itself—now incorporates the best of German research, with a little "lend-lease" American design thrown in.

A year ago the world got a glimpse of some Russian tanks at the Moscow parade in honor of the 30th anniversary of the Soviet revolution. These were the heavier, "Stalin" types. They were heavier than the heaviest (80-ton) German tanks used in World War II. But they weren't designed for a highly mobile, motorized army. They were more like heavily armored field artillery pieces.

• **Stress on Mobility**—Reports from German specialists working on Russia's new tank designs indicate that the heavy tanks are merely show-pieces. The real emphasis is being put on light, speedy, rapid-fire models.

The T-43—a new version of the T-34—is the current favorite of Soviet army brass. It is a 30-ton tank, with two machine guns and a 128-millimeter antitank gun. Other favorites include: (1) the modernized, 54-ton "Stalin" being turned out at Chelyabinsk and Sverdlovsk in the Urals; (2) a new 42-ton model with a 175-millimeter antitank gun being made at Leningrad.

• **Zeiss Lenses**—During World War II Russian tanks were badly handicapped



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by poor optical instruments. Here the new models show vast improvement.

The best of Germany's renowned optical equipment is now being installed in Soviet tanks. The Russians have at their disposal the famous Zeiss plant, formerly at Jena, Germany. The plant with 7,000 employees and 6,000 pieces of machinery was moved to Krasnogorsk, near Moscow. Also at Krasnogorsk is another confiscated German plant—the Schott works—which used to make lenses for Zeiss. The Russians took 92% of Schott's machinery, the entire technical staff, and a considerable number of workers.

• **Sprawling Industry**—But it's going to take more than Germany's technical genius to streamline Russia's sprawling tank industry for modern warfare. Radio equipment is still years behind U. S. standards. There is no evidence that the Russians have licked the fueling problem that harried them during the last war. (At one point civilians—mostly women—fueled the Red Army's tanks by walking miles, pushing oil drums ahead of them.)

Tanks are produced in Russia in hundreds of plants from Leningrad to Vladivostok. So far 21 tanks plants have been definitely pin-pointed. Here are a few of the more important ones:

Gorki. This city of half a million is the site of one of Russia's largest tank industries. Two plants alone, on the outskirts of the city, employ 25,000 workers together.

Leningrad. The Kirov works in suburban Leningrad employs about 17,000 workers. Two smaller suburban plants employ just under 10,000 workers together.

Stalingrad. This Volga River city, now 70% rebuilt, boasts three huge vehicle-manufacturing industries, each employing some 65,000 workers. The Krasnyi Oktyabr works concentrates mainly on tanks. The Stalin and Krasnyye Barikady plants turn out other vehicles with tanks as a sideline.

Urals. Chelyabinsk and Sverdlovsk each have tank plants employing a total of about 18,000 workers. (Chelyabinsk is now Russia's third largest city, with a population of almost 3-million. Fifteen years ago it was a small town of 20,000.) Some 160-mi. north of Sverdlovsk is the Nizhnii-Tagil tank combine employing 19,000 workers in its central plant.

Behind the Urals the information is more sketchy. But there is no lack of evidence that tanks are being turned out. At Stalinsk, a city of half a million, more than 1,000-mi. east of the Urals, there is a big tank plant. In the Far East tanks are produced at Khabarovsk on the Amur River, some 400-mi. north of Vladivostock.

And this is at best a very incomplete list. There are smaller plants in Georgia, in the southern Urals, and in western Russia.

• **Discipline**—Tank plants get special attention from the M.V.D.—the Kremlin's all-powerful secret police. Use of

ORDER OF THE DAY

Of Minister of Armed Forces of USSR

MOSCOW No. 59 SEPT. 12, 1948

Comrades tankists and tank builders!

Comrades soldiers, sailors, sergeants and petty officers!

Comrades officers, generals and admirals!

Today the Soviet people and their Armed Forces are celebrating Tankists' Day and note the successes achieved by the tankists and tank builders in strengthening the fighting capacity of the Armed Forces of our Homeland.

I greet and congratulate you on the occasion of **Tankists' Day** and wish the tankists and tank builders new successes in the development of our Armored and Mechanized Forces.

In commemoration of **Tankists' Day, I o r d e r:**

An artillery salute of 20 volleys to be fired today, September 12, 1948, in Moscow, the capital of our Homeland, and in the capitals of the Union republics.

Long live the Soviet tankists and tank builders!

Long live our Armed Forces!

Long live our Great Soviet Homeland!

Long live our Soviet Government!

Long live the Communist Party of the Soviet Union (Bolsheviks)!

Long live our leader and teacher, the Great Stalin!

Marshal of Soviet Union N. BULGANIN,
Minister of Armed Forces of USSR

TANKISTS' DAY order in English-language Moscow News glorifies tank industry

masses of slave laborers make this precaution doubly necessary.

Sabotage offenses are treated swiftly and finally. Death sentences are by no means unknown. And it doesn't pay for a worker to be late to his job or fail to perform his allotted task in the allotted time. Such offenses usually cost the worker two or three weeks' pay.

• **Inferior Works**—These working conditions leave their mark on the final product. Defective tanks amounting to from 15% to 45% of a plant's total output have been reported. The Kirov plant in Leningrad reported almost 40% of last year's output was defective. About half was traced to faulty materials; the rest to personnel failings.

Most important obstacle of all is Russia's rickety transportation system. The tank industry, like all the rest of the country's industries, suffers immeasurably through inability to get the right things, to the right place at the right time.

• **Bottlenecks**—When a new tank design is approved by the Red Army, it often takes 15 months to get it into mass production. Materials for production might be scattered all over Russia's massive territory. And materials movements invariably produce tremendous transportation bottlenecks.

The same bottlenecks crop up at the other end of the production line. For weeks—sometimes months—finished tanks lie exposed and uncared for in factory yards waiting for transportation to army bases.

And even after the tanks are put into the hands of the army, transportation problems come up. Last summer, when many tank force units and motorized infantry divisions staged maneuvers in the western Ukraine, all freight and passenger service on railroads operating in the area was stopped for several weeks.

But Russia still has probably the greatest mass of tanks ever assembled under one army.

MOSQUITO WAR

A large-scale war is raging on the Island of Sardinia off the west coast of Italy. An Italian organization, armed with aircraft and flame throwers, is making an all-out attack on the local mosquitoes.

The brains behind the operation come from the Rockefeller Foundation's International Health Division. The foundation also puts up the dollars for purchases outside of Italy. Money for local purchases comes from Italy's counterpart fund—the lire the Italian government has set aside to match the dollar aid Italy has received under the Marshall Plan.

When the war is over, Sardinia will be rid of the biggest obstacle to its economic development—malaria.

ECA'S LEDGER

Reports From Washington

ECA's procurement authorizations for the week ended Nov. 17 topped $650-million—a new high. That pushed the total spent so far well over the $3-billion mark.

Less than $1-billion of grant money is left to be parceled out. And only about $185-million of loan money is left. Odds are that after Jan. 1 procurement authorizations will be conditional, pending further appropriations from Congress.

That doesn't mean ECA's machinery will grind to a halt after the first of the year. Under the new buying scheme, much of each week's authorizations goes to cover purchases in the future (BW–Sep.25'48,p122). Some of last week's money will be used for purchases in the first six months of 1949.

● **Breakdown**—All told, last week's spending breaks down to: $207-million for food and feed items; $427-million for industrial commodities; $14-million for petroleum products for China; and $2-million for ocean freight.

Big industrial items were: machinery, $130-million; nonferrous metals, $111-million.

Machinery items included office machinery ($39.7-million); machine tools and metal-working machinery ($36.6-million); construction and mining equipment ($19.7-million); and farm machinery ($15.6-million).

Nonferrous metals include: copper ($53.5-million); aluminum ($21-million); zinc ($14.7-million); lead and lead-based alloys ($14.1-million); and tin—from Bolivia ($15.7-million).

Britain got $337-million. Adding in this week's daily authorizations, Britain has now received more than $1-billion in grants from ECA.

● **Loans**—Luxembourg signed for a $3-million loan last week. The terms were the same as for other ECA loans—2¼% interest, 35-year amortization period. Belgium is now the only Marshall Plan country that hasn't signed for a loan; it's expected to come to terms by next week.

Reports From Abroad

The Organization for European Economic Cooperation will have an interim report on its recovery "master plan" ready for Washington sometime next month. The final plan, which is supposed to show how western Europe will get on without U. S. aid after 1952, won't be ready before March.

The interim report will show how each country has fulfilled its share of the Marshall Plan bargain so far—how

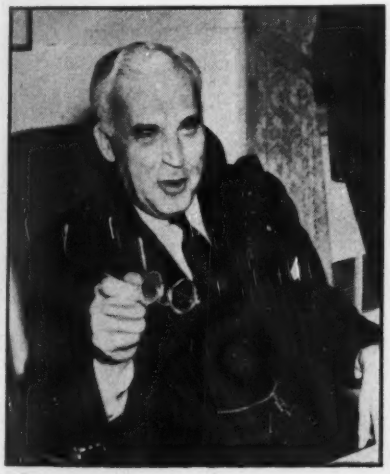
each has boosted its production, contributed to increased intra-European trade, and the like. It won't say how all the individual nations' recovery plans can be knit together into a master plan (page 107). But Paris reports considerable progress toward that goal. After much haggling, OEEC's experts have agreed within 5% what the goal should be for the over-all volume of trade in western Europe after ECA closes shop.

• **Strategic Materials**—The British Colonial Office is hanging out a "help wanted" sign for U. S. engineers willing to tackle some jobs in Africa. The head of ECA's Strategic Materials Division, Evan Just, got the plea when he was in London last month.

Just was in London to see what the British were going to do about developing the Empire's strategic resources, a good slice of which will end up in U. S. stockpiles. He heard a lot about the possibilities of African development.

But the British need some technical help. They have put out a hurry call for 25 geologists, and 25 to 30 topographers and surveyors to help find out just what's in the Dark Continent's treasure chest. Geologists are needed first in West Africa (Nigeria and the Gold Coast) to speed up the survey work for strategic materials. Northern Rhodesia, Tanganyika, and Kenya in East Africa also want some technical help.

The topographers are needed to plot new railways for Africa. One of the biggest handicaps to the development of strategic materials there is the difficulty in getting them to coastal ships.



Island Developer

Paul V. McNutt, former American Ambassador to the Philippine Republic, takes over a new top post in the islands this week. McNutt will be chairman of the Board of Philippine American Finance & Development Co. The company is engaged in opening up gold and base metal properties on the islands of Mindanao, Luzon, and Cuba.

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Can You Show Inflation On Your Books?

There's a more or less private argument going on between the accounting profession and some of its biggest customers—over extra depreciation allowances to cover today's inflated replacement costs. We don't mean to horn in on it. But both sides have declared that their main object is to keep the public from getting the wrong idea about corporate earnings. And so we think some public discussion would be a good thing all round.

Briefly, here is the sort of problem involved:

In its report for the first nine months of 1948, U. S. Steel Corp. showed total sales of $1,755,000,000. To compute net income for the period, it subtracted various costs from this gross figure. Among other things, it deducted wages and salaries, products and services bought, and "wear and exhaustion of facilities, based on original cost." And under the "wear and exhaustion" entry it also deducted $39.7-million "added to cover replacement cost."

On this basis, Big Steel came out with net income for the nine months of $88-million. That is about $9-million less than it showed for the first nine months of 1947, when it deducted only $19.6-million "to cover replacement cost."

According to the ideas of the Committee on Accounting Procedure of the American Institute of Accountants, this is all wrong. Big Steel should have figured its income without subtracting anything for extra replacement costs. Then, if it wanted to, it could have earmarked part of the net income as a reserve to cover extra replacement.

Figured this way, Big Steel's income for the first nine months would have been about $128-million in 1948 and $117-million in 1947. This year, in other words, would have shown up as some $11-million bigger than last instead of $9-million smaller.

Big Steel is sticking to its guns, however. Chairman Irving S. Olds says "adequate provision should be made currently for the replacement of assets which are constantly being worn out." Accountants retort that income is one thing and what you do with it is something else again. If Big Steel follows the same practice in its annual report, its auditors probably will take an exception.

Importance of the Issue

At first glance, the whole thing may look like a pretty trivial issue—about on a level with the ancient argument over whether it's proper to put tomatoes in clam chowder. No matter how it sets up its books, U. S. Steel will get the same amount of cash out of its operations. And it will earmark the same amount for extra replacement costs. It won't even get a tax advantage by increasing its depreciation charge. The Treasury doesn't allow extra depreciation as a deduction from taxable income.

But the importance that people attach to the net-income figure these days gives a very practical flavor to the argument. Newspapers and financial services will pick up U. S. Steel's income figures, often without giving the breakdown of cost items. It can make a lot of difference to the corporation if stockholders, investors, and labor unions get the idea that it earned more in 1948 than it did in 1947 when the company executives think it really earned less.

And, of course, U. S. Steel isn't by any means the only company that has been wrestling with this problem. All corporations with substantial investments in fixed plant and equipment face some variation of it. Many follow much the same practice that Big Steel does, in spite of the opposition of the accountants.

A majority of businessmen and financial analysts think corporate income statements should explain the necessity for retaining part of the income to meet higher costs. That's what the American Institute of Accountants found out in a survey last summer. But, according to the survey, a majority also opposed making any basic changes in the income statement itself.

Think It Over First

Whatever a company does, obviously it should give a full explanation of what it is providing for replacement costs and why. It shouldn't count on a cryptic note in fine type to tip off the casual reader of its reports.

Fundamentally, we are inclined to sympathize with the attitude of Big Steel and the other companies that want to allow for extra depreciation before they give a figure for net income. A businessman thinks of himself as a going concern. And profit isn't profit to him if he has to plow it back just to keep his plant intact.

But we can see at least two things that a businessman should consider carefully before he whittles down his income figures to allow for inflated plant costs.

First, there is no systematic or generally recognized way of doing it. Nobody knows what replacement costs will be in the future. Hence, any allowance now has to be arbitrary. And when you start making arbitrary adjustments you open the door to all sorts of trouble. The financial statement becomes less and less an unbiased report of what happened during the year and more and more a picture of what the company officers want the stockholders to think happened.

Second, as soon as you abandon the strict rules of accounting you lay yourself open to a charge of monkeying with the books—no matter how good your intentions are. And that can do you a lot more harm than the misunderstandings that may arise from presenting the figures just the way they come out. Surveys show that there already is a widespread suspicion of corporate reports. If that's reinforced by a rumor that companies generally are doctoring their accounts, no amount of explaining will undo the damage.

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